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ADDRESSES.

THE PRESIDENT'S ADDRESS.

Delivered at the Fortieth Annual Meeting of the American Medical Association, Newport, R. I., June 25, 1889.

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OF CINCINNATI.

The Premier, Mr. Gladstone, after quoting the statistician who estimates the English-speaking people at the close of the next century at one thousand millions, says: "What a prospect is that of many millions of people, certainly among the most manful and energetic in the world, occupying one great continent." This destiny in numbers is startling, but the assertion of Dr. Dollinger, a German scholar, portrays the culture of the future almost as strikingly when he says "that the intellectual primacy of the whole world is certain to fall to the Anglo-Saxon race." Most of that race will be in America.

Looking to such a future the position of the learned professions is certainly conspicuous — their obligations imperious. Medical men should be loyal to this grand destiny.

An eminent modern critic, in discussing civilization in America, while admitting that we have well solved the political and social problems, asks what have we done to solve the human problem, "the humanization of man in society." The struggle in his own country, he asserts, has resulted in "an upper class materialized, a middle class vulgarized, a lower class brutalized."

We trust that our efforts have yielded better fruit; and since medical science and medical men are prominent factors in society, among every people, we may well ask, what have they accomplished, what part they have here taken in the solution of the vital problem? In the "Century of Medicine," Prof. E. W. Clark in his classical address says:

"It is not an extravagant assertion to say, that in all this turmoil, change and progress (referring to the revolutions and changes in society, religion and government for the past century), medicine has kept abreast of the other natural sciences, of politics, and of theology, and has made equal conquest over authority, error and tradition," and it may be added, has contributed largely to man's comfort, happiness and advancement. To intensify this, reference need only be made to some of our triumphs, to Vaccination, to Anæsthesia, to Sanitation, the prevention of pestilence, the lengthening of human life. It is, however, more especially the contributions of the profession in America to which attention is desired at this time. What are we doing in the humanization of man, in the work of civilization?

Are our medical practitioners and our medical teachers what they should be? We shall see. Criticisms abound concerning the defects of medical education. Those who do not condemn, often ridicule. These criticisms and strictures are made for the most part, it must be said, by gentlemen unacquainted with teaching, without any practical knowledge of the constitution of medical colleges, or of the toil, devotion and sacrifice made necessary by those engaged in didactic and clinical instruction.

These censorious addresses are delivered before and to a body of professional gentlemen, the peers of any, some of whom have grown gray in the hard service, others are still in the prime of life, with reputations coextensive with civilization. The rest are young, full of life and enthusiasm, fired with ambition to render loyal service to that profession which they have chosen. Can our system be so defective? The pessimistic orator seems to forget that he is the product of the system of medical education which he is so severely condemning. Some one has said, "By retrospection and introspection an individual, like a profession, may be benefited." In this self-examination we should have but one motive, the elimination of error, the development and support of truth.

Education cannot make all great or equal. It tends, however, to make all safe. In the crucible of private, practical life, evolution asserts itself and the fittest survive.

In making a retrospect of our profession it may be well to look for a moment at medical teaching in this country.

The way is long between Aristotle and Bichat, and Buckle says that he found no middle-man in this long period; it is darker than it is long. During all this time medicine was not taught legitimately. The renaissance, if it may be so called, began with Hunter and Bichat. No real progress,

however, could be made while oxygen remained locked in the silent embrace of all organic and inorganic nature. Priestly, escaping from the religious and political contests, and it may be persecutions, of the old world, came to this country to demonstrate his great phlogiston, oxygen.

Bichat and Hunter restored the proper study of medicine. They represent the turning-point from idealism, speculation and theory, to accurate and close observation. The latter, John Hunter, in 1767, was lecturing and taking students into his own house, and it is curious to know that here, in far off America, Shippen and his contemporaries in Philadelphia and New York, about the same time, or very soon after, began teaching medicine and surgery upon essentially the same plan. Of these men, one who so recently passed away, that you can almost hear the sound of his voice, and feel his magnetic presence, when speaking of the men who lived at the close of the last, and during the early part of this century, said, and justly said, "Not a few of them were the worthy peers of Roux, Abernethy, Crampton, Bell, Graefe, and Scarpa."

To quote again:

"During the past century, medicine has been enfranchised from superstition, *quasi*-charlatanism, bold empiricism and speculation, and has developed into a symmetrical science, affiliated with the other natural sciences, studied by the same methods and by the same appliances as they are, and like them, has been planted upon the solid basis of fact and demonstration."

It may be profitable for us to inquire and determine what part the profession in America has taken, in placing medicine upon the high ground which it occupies. What have we done, what are we doing, and what forecast can we make of the future?

At the close of the eighteenth century, Boerhaave declared that all that had been learned up to that time was comprised in three propositions: "Keep the head cool, the feet warm, the bowels open. All other pages in the volume which he left were blanks. Many pages, however, it will not be denied, have been filled during the present century. What have been our contributions? Have they been such as to rank us with the acknowledged conservators of mankind?

In giving attention to this subject let us for a moment reflect upon the peculiar position of the profession and of medical teaching in this country. For many years (and even now) with few exceptions, medical colleges were the creation of the members of the profession, most often of the faculties composing the schools, without endowment—indeed, it may be said that almost everything on this continent is endowed, except medical colleges—without Governmental aid, depending for their support upon the sacrifice of time and money on the part of the gentlemen occupying the chairs. Yes, not only without patronage from the Government, but society, from some unknown cause, has ever been against legitimate medicine, depending upon the scientific physician in time of trouble, yet, in the interim, openly supporting all sorts of shams, frauds and impostors.

Elsewhere, college work is provided for by the State; especially laboratory investigations—the nature and the genesis of disease. Hence, it is not strange that, in such departments, we may not be so far advanced as our European brethren; but, while they have been engaged in experimental studies, we have developed the practical. But everywhere is seen among us an earnest, a burning desire for higher culture, for more exact and accurate knowledge. Especially is this true of our younger members and of those about entering the profession.

A movement is being made to concentrate those who have had preliminary advantages—those who enter the profession as college-bred. No objection can be urged to this if it be not too exclusive. All efforts, in fact, to refine our profession without emasculating it, should meet with judicious approval.

THE PHYSICIAN OF THE FUTURE.

Whence are medical students to come? What facilities are now afforded, and what does the future promise for the education of our young men, the class from which the medical student, the "coming doctor," is to be selected? The answer to this question will give some comfort, we trust, to the pessimist, and soothe the restless and at times unreasonable critic. And now as to our resources for this work.

By the last census it was shown that nearly four thousand institutions—schools for higher learning—existed in the United States, and that nearly four hundred of them ranked as Colleges or Universities. In these are massed, yearly, sixty thousand pupils. They, together with two hundred thousand common, or primary schools, in the higher grades of which the curriculum nears that of many colleges at home and abroad, a third of a century ago, may be looked upon to supply, year after year, a better material from which medical students will be drafted.

Prof. Charles W. Eliot, in his beautiful and forcible Centennial response, enumerated our educational facilities more generously. He painted our future more hopefully when he spoke of the 8,000,000 children in elementary schools, 250,000 in secondary schools, 60,000 in colleges, with 360,000 teachers to train and develop them.

Every one traveling through the States—especially those of the West and South, and those situated in the far away mountains, and on the Pacific—must be impressed with the onward march of public instruction, the gradually increasing general intelligence, and the vast sums

that are annually expended for the education of the people. Public school buildings, by their size, adaptation and attractive surroundings, give an impression which the most skeptical must feel, a promise of the future which cannot be misread. From such as these, scientific medicine must reap a share. Every teacher, every one connected with the examination of candidates for the medical degree, knows—and the knowledge is reassuring—that, year after year, the grade of the medical student is advancing, that the material out of which the practitioner is made is constantly growing better, becoming stronger; in other words, that the preliminary education of our students is steadily becoming more broad and comprehensive. I gave utterance to this view a few years ago, in an address which I had the honor of delivering to the State Medical Society of Ohio. Time, I believe, has confirmed what I then said. This confirmation is seen in our graduates as they go forth to take up the line and battle of life. Are they not the equals of the graduates in other professions, in law and theology? As life advances, are they not the peers of any, in all the useful elements of true manhood? Are they not the citizens of best rounded characters, citizens most relied upon by their neighbors in foul as well as fair weather?

Again, in addition to facilities already referred to, the most generous provisions are being made, all over our land, for institutions which will be worthy to be called Universities. From these, graduates will emerge worthy to rank by the side of those bearing the prized degrees from Oxford, Cambridge, Paris, Heidelberg or Leipsic.

During the summer of 1888, I witnessed the beginning of a University in California which, in scope and equipment will surpass, probably, any school upon the continent. Should Governor Stanford live to develop his conceptions, that far off State will have an institution of which not only the Pacific Coast, but our entire country; yes, all civilization, will feel justly proud. It may be so liberally endowed that it will command the best abilities of the world.

Of course, upon such an occasion as this, it would hardly be expected that I should in detail refer to the many liberal donations and bequests which have been made, by generous citizens, for developing higher culture—a more comprehensive education. I will, however, be pardoned for referring to a few, and I may say, without being too enthusiastic, that the future is aglow with promise. The high-hearted examples which have been set will be followed by other favorites of fortune, and this country may surpass the world, not only in common schools, but in her institutions for broader and deeper education.

In looking at this promising future, may we not hope that, before another half century closes, students from the old world will flock to this, to sit at the feet of the wisdom here installed? Is it too much to hope that, in the not far off future, the preliminary education of our students will be equal to that required in the best schools of the world?

Defective as has been much of the material, yet have we not produced some marked results? Our best are equal to the best anywhere; mediocrity always and everywhere finds its own. The poor in medicine, the weak brother, however much we may deplore him, however much we may train him, we have, like the poor, always with us. This is the lot of humanity in all lands, among all peoples, new or old. A word as to the physical qualities of "the coming doctor." Recently a distinguished foreign traveler, in speaking of our educational facilities and national peculiarities, said: "Students are much calmer than their colleagues in Europe. They don't at all trouble themselves about politics or affairs outside their line of duty, and with the practical sense which animates the nation, they try to make the best use of their time. They fight no duels, and it is only for health and recreation that they take part in various sports and games." These remarks apply with equal, in fact, with greater force, to medical students.

It is to the country schools, not to the city-bred, that medicine must look for many of her strong recruits. Cities too often emasculate—young men are vitiated by indulgence and vice before they become possessed of serious thoughts, before they realize the elements of a healthy, vigorous life. It is this country-bred, this excellent material which is, as we have seen, yearly growing better and better qualified to enter upon the duties of the profession. From these we must look for the men of distinction, the leaders of the future.

Is this picture overdrawn? One word more. In many of the States of the Union, in addition to the liberally supported free schools and schools for higher education, already colleges have been established through the munificence of the General Government, in which the degrees of A.B. and A.M. may be obtained. They are absolutely free colleges, at which the poorest boy in the commonwealth may receive a classical education. And here you will allow me to say, we cannot insist too strongly upon the necessity of classical education; without it the medical man must ever be at a disadvantage. Without a knowledge of Latin and Greek, sure and distinguished success is uncertain. The student may neglect Algebra and the Higher Mathematics, but let him, by all means, have a liberal knowledge of languages.

At the last commencement of one of our western schools, "40 per cent. of the graduating class had been admitted on diplomas from literary or scientific colleges. The balance of the class had received from one to five years of academic or collegiate instruction." This college is with-

out endowment—depending entirely upon the learning, devotion and sacrifice of the Faculty.

But to return. Prominent among the States in providing institutions for advanced culture, the great frontier State, Texas claims a high position. The University of Texas will be one of the most liberally endowed; millions of acres of land have been donated for university purposes. There, in that Empire State, may yet be seen one of the greatest schools of literature, science and philosophy on the Western Continent. The Univirsity of Virginia, projected in the early days of the century, by her great commoner, Thomas Jefferson, has yearly sent forth graduates equal in all the elements of advanced scholarship to those from any school. This may seem high praise, but the records of her alumni justify me. The same may be said of Harvard, Yale, Princeton, Columbia, Cornell, and of most of our older institutions. The University of California has already an annual revenue of about $200,000. The Michigan University, with a yearly income of almost a quarter of a million of dollars, has well nigh two thousand students, taught by more than one hundred teachers.

Let us not, gentlemen, be impatient; the influences are already projected which will give us students equal to—up to—the highest standard of preliminary preparation. If we have accomplished so much in our primitive stage, what may we not expect when all our great preparatory works come fully into action?

From this view of the resources from which medical students are to be drawn, and of the liberal preparations and facilities for their culture, we may well ask, what is the profession doing to profit from such advantages?

Some of the classical schools at Oxford and Cambridge were organized as early as the thirteenth century, but the systematic, scientific study of medicine and surgery came long subsequently—not for four hundred years later—about the middle of the eighteenth century. It was first projected in Great Britain, and soon after in our Atlantic cities. Unlike the Old World, our fathers had a wilderness to conquer before progress could be made. When the Pilgrim Fathers left England, reading and writing were rare accomplishments; chimneys in that country had just been invented, and flock beds were luxuries. The adventures—the emigrants to these shores from that ancient and imperfect civilization—had much to learn, but in the midst of their pitiable ignorance, facing great hardness and pressing wants, they were quick to provide educational opportunities for all. The result of their efforts are apparent—they are before us. Could more have been accomplished in one century?

MEDICAL SCHOOLS.

Our medical colleges now number a few more than one hundred. They may be classed as: 1, Metropolitan, those in large cities. 2, Medical colleges in less pretentious cities. 3, Medical colleges in small cities. 4, State medical colleges. For convenience, however, we may speak of them as Metropolitan and Provincial.

Before speaking more definitely of our medical institutions, allow me to refer for a moment to the proposition, that medical schools in our country have been developed by the labors, by the self-sacrifice of the profession. As previously stated, it may be said that in this country everything is endowed except medical colleges, schools for teaching medicine. Yes, all financial responsibilities have been and are assumed by the faculties, by men who give every hour not devoted to "earning the guinea" to college work, and in most instances, without pecuniary reward. It is only recently that the wise, the generous, the favorites of fortune, and a few of the States, have conceived the idea of endowing medical schools, institutions where medicine and surgery can be cultivated without the embarassments of financial responsibility. In the presence of such facts, the work of the grumbler seems indeed ungracious.

In our Metropolitan colleges, every physician may feel a just pride; their graduates, most of them, will compare favorably with those educated anywhere on this earth.

The accomplished Dr. Senn, after a liberal experience with foreign schools, said: "There is no question in my mind, that the average American student learns more in one month, than the average German student in three. He learns more, not because he has better teachers or better facilities, but he makes better use of his time. I am satisfied that in our last graduating class, I had at least a dozen students, who, after studying three years, would pass a brilliant examination in any English or German university. They would have felt at home, even in a dress coat in Volkmann's Klinick passing their final examination."

Provincial schools do praiseworthy, yes, thorough work in training young men, not only in rudimentary branches, but in practical, clinical studies. Many supplement these by hospital attendance in the great cities, and by post-graduate courses. It is gratifying to know that these organizations are being established in all of the great medical centres.

The advance in medical education is again most distinctly pronounced by a remark recently made by one of our distinguished fellows, an American-bred physician, of whose fame we are all justly proud. In a conversation, Dr. Batty said: "When I began the practice thirty years ago, there was scarcely a graduate within fifty miles of my residence; now, however, there is hardly a practitioner in the same territory who is not a graduate, and, year after year, a portion of

our young men leave home to avail themselves of clinical advantages, to attend post-graduate instruction." Could anything show more forcibly the conservative and steady growth of medical culture?

HAVE MEDICAL COLLEGES INCREASED TOO RAPIDLY?

Should they be established in small cities where clinical material is limited, where it must be comparatively scarce? Before answering this, it may be well to reflect upon the proposition, that in our own country, as well as elsewhere, great achievements have often been made in the Provinces and not always under the shadow of the Universities. One of the great operations waited for years for a metropolitan disciple—one to take it up—and that too, long after the provinces, at home and abroad, had demonstrated its vital utility, its claim upon the scientific and skillful surgeon.

As our population increased from three to sixty-five millions, the demands for medical men were great—colleges increased necessarily. Have they multiplied in undue proportion?

In answering this question, I beg again to quote from my beloved master, Samuel D. Gross, to whom this question had been put. After mature deliberation, he said: "Our colleges are not annually graduating one physician for each county in the States and Territories. This is certainly not exceeding the demand." A considerable proportion of those who graduate never enter the ranks—death and desertion claim a large share. It would simply be impossible for the metropolitan schools to graduate all required.

For the introduction of young gentlemen into the profession, there is a mutual responsibility between teachers and preceptors. In very truth it may be said that colleges do their duty, their very best, with the students furnished by the preceptors. Give us liberally-educated young gentlemen, and we will furnish graduates worthy of the degree. Medical colleges, however, do not make the physician. They merely furnish the foundation work; the individual must do the balance. In no place is evolution so marked—the fittest will and should survive.

LABORATORY WORK.

Huxley says: "The microscope extends the realm of Pathological Anatomy to the limits of the invisible world."

"The intimate alliance between morphology and medicine has made the natural history of disease attain a remarkable degree of perfection."

Dr. George M. Sternberg, the distinguished Pathologist, recently connected with the Smithsonian Institution, in referring to some of the laboratories established in this country for the study of Pathogenic Microörganisms, says: "It is no longer necessary to go abroad for instruction in this department of science, since the Laboratory of Prof. Welsh, in Baltimore, and the Hoagland Laboratory, in Brooklyn, afford facilities which are unsurpassed by any of the laboratories of the old world."

Indeed, it may be said that provisions for the study of Pathogenic Microörganisms are established in most of the leading schools of this country—in New York, Philadelphia, Boston, Baltimore, and the cities of the West and South.

You will pardon me for mentioning some of the investigators.

Johns Hopkins' University has for its Director, Prof. William Welsh. The Hoagland Laboratory, of Brooklyn, New York, established through the generosity of Dr. C. N. Hoagland, has been built and equipped in the most complete manner for research work in Bacteriology and Experimental Pathology. Prof. George M. Sternberg is to be the Director of this advanced institution.

At the University of South Carolina, Dr. Meade Bolton, who has had the best of training at Berlin and Göttingen, is at the head of a laboratory. Dr. H. C. Ernst has the direction of a Bacteriological Laboratory in connection with the Harvard School of Medicine.

Prof. James T. Whitaker, who had the honor of being the first American student of Robert Koch, demonstrated, at Cincinnati, in 1882, the tubercle bacillus, after a lecture upon the subject before the Philadelphia Academy of Medicine. In 1887 the Medical College of Ohio imported a complete outfit for Bacteriologic study. The conductors of the Laboratory, Drs. Rachford, Cameron and Freeman, during the first course, had the opportunity of doing some good work in the discovery of the typhoid bacilli in the reservoir supplied from the Ohio River, then at a very low stage. The discovery led to the general adoption in the city, as advised by leading physicians, of boiling all drinking water, a plan which undoubtedly limited the spread of the disease.

Among others may be mentioned Dr. Prudden, of the College of Physicians and Surgeons, of New York; Dr. Geo. A. Kemp, of Brooklyn; Dr. Mall, of Baltimore; Dr. Booker, of the same city; and Dr. Frank S. Billings, of Lincoln, Nebraska.

One of the earliest, most accomplished and accurate cultivators of microörganisms, is Dr. James E. Reeves, of Chattanooga. His technique is singularly beautiful. Many of his preparations are to be found in the National Museum.

Dr. Victor C. Vaughan and Dr. Heneage Gibbs, conduct laboratory work at Ann Arbor.

The University of Pennsylvania has at the head of its laboratory Dr. John Guiteras, a Pathologist who has distinguished himself in the study of the origin and spread of yellow fever.

Thus it will be seen that in all parts of our

country—East, West, North and South—laboratories are being established for original work.

HISTORY OF MEDICAL TEACHING IN THIS COUNTRY.

A brief review of medical teaching in this country will be pardoned—it may be profitable—it will certainly illume the present, and may be somewhat of interest to the future.

The first medical lectures were delivered by Dr. John Morgan and William Shippen, in 1767, in Philadelphia. Dr. Rush and Dr. Physic soon after participated, and in 1768 the medical department of the University of Pennsylvania was organized; that great school which is steadily advancing to the highest station. Philadelphia was a small, a provincial city at that time; now she is only second to the great metropolis in numerical strength, but second to none in the thorough equipment of her medical schools.

Contemporaneous with Philadelphia, an organization was projected for medical instruction in New York. In 1767, the first steps were taken which resulted in the school, ever since known as the "College of Physicians and Surgeons," one which challenges the confidence of all. The medical colleges of New York, endowed, not by government, but by her public spirited citizens, have won the honors which they wear so well.

In 1785, the first school was organized in Boston. The chairs were four, and the session four months. Harvard is the outgrowth of this humble beginning of that provincial faculty.

In 1800, the first medical instruction was given in Baltimore; since then, the schools of Maryland have occupied a deservedly high position. Recently one of her citizens made an endowment by which the "Johns Hopkins University" will be equipped for the most thorough work, experimental work, laboratory studies, a range and grade of investigations *en report* with the spirit of the times.

This great benefactor has also given to Baltimore one of the most completely equipped hospitals to be found on this earth.

The great Mississippi Valley was yet unknown, but soon after the close of the Revolution, emigration began, and as early as 1799, Dr. Samuel Brown organized the medical department of Transylvania University. Dr. Benjamin Dudley effected a reorganization in 1819. This school, after many prosperous years, having graduated men who acquired distinction at home and abroad was transferred, or rather, most of the faculty removed to Louisville, when and where the University of Louisville was founded.

During the early part of the century, medical schools were organized in several of the Eastern States, usually under State or Church patronage. Most of them exist to-day. Some of the most distinguished men in our profession have been associated with these institutions.

As the West and South were peopled, medical schools were established in cities and promising towns. As early as 1819, Dr. Daniel Drake secured the charter of the Medical College of Ohio, and had it legally connected with the City Hospital. The faculty constituted the hospital staff, the members of which were required to give clinical lectures—the first forward step on the continent, in blending didactic with clinical instruction.

The physicians in South Carolina began medical teaching in 1823, and those of Louisiana in 1835. In both of these States schools of high character have been maintained.

In closing this very brief review of our colleges, Metropolitan and Provincial, I think it may be said that year after year the standard of the Doctorate is being elevated, preliminary examinations and graded courses are being adopted, the smaller schools, to which most blame is attached, whether justly or not, with a disregard of self-interest seldom seen, are yearly reducing the size of their classes by insisting upon higher preliminary education, by extending the curriculum and by graded instruction.

MEDICAL JOURNALS.

Medical journals, Metropolitan and Provincial, are the heralds, the vanguards of medical progress, the exponents of professional culture. They are closely associated with the colleges in education and in post graduate instruction. In them appear the best thoughts of the best men; they constitute the great forum of intellectual combat; upon their pages pretension is analyzed and estimated, and worth recognized; that which is new or original is endorsed, or rather encouraged; it is only the plan, the original investigation which is endorsed; the results, the conclusion must be subject to the crucible of test and trial.

The London *Lancet* and the *American Journal of the Medical Sciences* were almost contemporaries—who can overestimate their value—their influence in medical progress. While our journals, both Metropolitan and Provincial, are freighted with the best thoughts of the best men, yet, it must be confessed, that trash and light material—very light material—may be found in all, but the reader, nevertheless, will find much that is not worthless.

THE JOURNAL of this Association has won its way to its present high position by its dignified course and its essentially scientific character; but has it reached its full usefulness? A learned and distinguished author, and a highly prized fellow of our Association, at my suggestion, gives his views upon this question.

Dr. Comegys says: "The undertaking, seven years ago, to establish a weekly journal, was a happy conception, and has been carried on as successfully as the resources of the Association

would admit. To Dr. N. S. Davis unstinted praise is due; proportionate praise is also due the Board of Directors with whom he has been associated.

"A large number of the members believe that it is entirely feasible to enlarge THE JOURNAL and give to it increased capacity for usefulness; indeed, that it should be made more fully capable, as the organ of the Association, to assert and maintain the dignity and power of the medical profession as one of the greatest factors in civil life; that to it society must ultimately turn, to find, not only the resource to assuage the distress arising from the diseases and accidents of life, but as to its protection from all those evils that fill the land with apprehension of desolation and ruin.

"We know to what an immense extent we can estop the approach of the pestilences that desolate lands and which menace, through the paths of commerce, the whole area of civilization. We know what we can do to improve the homes and places of labor of the lower and toiling classes of cities and other crowded centres of population. There is nothing, indeed, connected with our own social State, which the medical profession should not supervise and which it should not have the power to control. A great organ is necessary to enlighten, strengthen and lead the profession in all directions to bring, to bear its beneficent agency for the correction of the terrible evils of society.

"Such a journal must be made encyclopædiac in character, in which can be found the proceedings of distinguished societies of this country and of Europe, the work of the chief actors of medical progress in all parts of the world. Twelve thousand subscribers would give $60,000, this would insure $40,000 from advertisements, making an income of $100,000, which would sustain one of the grandest journals in the world.

"The *British Medical Journal* in fifteen years has 14,000 subscribers and an income of $125,000. May we not hope to reach this, and when we do, who can compass the good which the American Medical Association will accomplish."

THE MEDICAL AND SURGICAL LIBRARY AND MUSEUM AT WASHINGTON.

Another important factor in professional culture is the great Library and Museum at Washington, evoked by the efforts of an American bred physician, John S. Billings. The Library of the Surgeon-General's office of the army now contains 92,000 volumes, and 137,000 pamphlets, being the largest collection of medical literature in the world, and it is not only the largest, but the most useful. This is because it has an Index Catalogue, which not only shows what the Library has of the works of any author, but for any given subject, indicates all the original articles in journals and transactions, as well as the books and pamphlets which relate to it, and thus forms a Medical Bibliography which saves an enormous amount of time and labor to those engaged in medical literary research. This catalogue is being published at the rate of one volume a year, nine volumes have been issued, and six more will complete the work. The Army Medical Museum is a great pathological school, and now contains over 15,000 specimens, being one of the eight largest museums in the world, and richer than any other in illustrations of Military Medicine and Surgery. This Library and Museum are national in scope and character. They have at least been securely placed in a fire-proof building well adapted to their needs, thanks to the efforts of the medical profession, and we should see to it that they are maintained and increased to the highest degree of completeness and efficiency.

The Medical Profession asks very little of the General Government, but it does ask that these two institutions shall be made as useful as possible. The number of copies of the Index Catalogue, which Congress authorizes to be published is hardly sufficient to meet the demand, and the repeated requests for authority to publish an illustrated catalogue of the Museum for distribution to the profession have not yet received any attention from Congress, and it is time we took the matter in hand. When we, who are the family physicians of our Senators and Members, say to them that this is a thing that ought to be done and must be done, it is pretty certain that it will be done. There is nothing that will do more to promote higher medical education, to stimulate research, and to crown American Medicine with honor, than to give ample means to this great Library and Museum to obtain materials and to publish widely the results.

MEDICAL AND SURGICAL HISTORY OF THE WAR.

This matchless record of Military Medicine and Surgery, is a marked testimony to the profession of our land. Let us for a moment compare it with similar work elsewhere. After the great Crimean war was over, its experiences, collected, weighed and analyzed, how strange in the light of present surgery, and in what contrast with the lessons taught in our great conflict, is the record of McLeod upon one vital operation—trephining for fractures of the skull. In his "Notes on the Surgery of the Crimean War," that distinguished gentleman says:

"If any patients were lost from not having been operated upon, I never saw any of them, but I do know of some patients who died because they were subjected to operation."

And what a fearful commentary upon military surgery of that campaign McLeod makes when he writes:

"Thus it would seem as if severe fatigue,

irregular, and, it might be, intemperate diet, are less injurious to men with fracture of the skull than the probings, pickings and trephinings which form the more orthodox and approved practice."

It may be truly said that the judicious use of trephine during the conflict between the States, supplemented after the war by American surgeons, especially by one of our fellows, Prof. W. T. Briggs, led up, led surely, safely and steadily to the achievements of Victor Horsely, the master of us all in brain surgery.

MEDICAL SOCIETIES.

Our medical societies, local and National, are great factors in professional progress. Not alone are they valuable for their social opportunities, but in and through them a vast amount of valuable matter is presented.

MEDICAL LITERATURE.

Had Sidney Smith been a physician and given to reading, he would not, even in 1850, have asked the questions: "Who reads an American book?" "What does the world owe to American physicians and surgeons?"

This reverend gentleman, this famous critic, could not have heard of Ephraim McDowell, whose brief paper, detailing his first three cases of ovariotomy, published in "The Philadelphia Repertory," in 1817, was of more value, did more for the conservation of human life than a score of ordinary publications. Our first half-century may be poor in books, but it abounded in strong, brave conscientious and devoted men, men who, with the most limited resources, accomplished the grandest results. They compelled success because they deserved it.

The ink was hardly dry upon that cynical pen when anæsthesia was presented by the profession so poor, as he supposed, in valuable works.

But what country or age can match, in great contributions to the relief of the suffering, McDowell, Sims, Bigelow, Sayre, Batty and Emmett, and that trinity of men—Wells, Morton and Jackson—who gave anæsthesia to the world. Think of anæsthesia and of its influence upon the progress of medicine and surgery. But yesterday a writer in the London *Lancet* gave a graphic history of its reception in London; how the great Liston, having a patient who could not nerve himself up to the point of consenting to have a limb amputated for strumous disease of the knee-joint, decided, that, "if the insensibility could be insured and maintained for one minute, he would amputate." Reflect for a moment on the hesitancy of the great surgeon of University College Hospital, as he stood by the side of that patient; he could hardly believe the novel report as it came over the sea. Willing and anxious as he was to operate, he hesitated to urge the poor patient to make the experiment—experiment it then was. In a week, however, it was legitmate practice all over the world.

The heart of every American physician is filled with thankfulness when he remembers that in the Providence of God this great boon to humanity was vouchsafed to his country. The very ground upon which stands Massachusetts Hospital is sacred to us all. Associated with the discoverers must ever be the name of Dr. Hayward, who performed the first operation under the strange letheon. Previous to this operative surgery was slow, tedious and almost cruel. Contrast it to-day with what it was previous to 1847. What grand strides it has made under the direct support of anæsthesia and its almost equal co-laborer, antisepsis; the great cavities are invaded, and invaded safely; the abdomen has become a familiar field, and who can forecast the surgery of the brain?

Since Emmett's operation we hear no more, neither in this country nor abroad—neither in London nor Berlin, neither in Paris nor Vienna—of that culmination, that *ultima thule* of ignorance, "ulceration of the os." What a disgrace that term was to the surgery of the world!

The ignorance in diagnosis was only surpassed by the cruel treatment which it evoked, the application of caustics to the tender everted membrane of the cervical canal.

Has the operation, Bigelow's litholapaxy, the crushing and evacuation of a stone at one sitting, been truly estimated? Its adoption in one celebrated case might have changed the destinies of Europe. Previous to Bigelow, lithotrity was an uncertain, and, in most hands, a cruel operation: "Crush all possible at a short sitting, and allow the fragments to pass *via naturalis*." Bigelow realized that if anæsthesia is safe for two minutes, it is safe for two hours or more; hence, he said. "Crush it at once, and evacuate the bladder by an aspirator." The operation, in proper cases, is as practical as the description is brief and efficient.

The accomplished Edmund Owen, M.B., F.R.C.S, upon calculus, says: "With rare exceptions only two operations are now practiced—suprapubic lithotomy and crushing, with evacuation at a single sitting." A high compliment from an eminent authority.

The story of Ephraim McDowell, though so often repeated, humanity never tires of hearing. To us he belongs, and to us only; we cannot share his fame with another; we would not if we could. Who can measure the relief which his operation has bestowed upon suffering woman?—not only woman, for his was the genius which opened the way for laparotomy in both sexes.

CLOUDS.

What has been accomplished by the profession in this country, self-reliant, and as we have here-

tofore said, without governmental or social support, is certainly worthy of congratulation, and gives ground for hopes of a rosy-hued future; but, alas! there are some dark clouds to be seen—some spots on our sun of promise! Have we inherent defects in our organic law—our *esprit de corps?*

Upon the face of our promising future some omens of evil appear, indications which look not up but down, not forward but backward, not to the elevation but rather to the degradation of our profession. Heretofore we were an organization into which no species of fraud could enter; pretension, ignorant pretension, stopped at the door. No *ism* or *pathy* was admitted; something more than a diploma, "a legal diploma," was required—a clean bill of conduct, free from false assumption, assumption of universal knowledge, of specific remedies, of imaginary potencies; in fact, of all shams and false claims, a guild in which there was the greatest freedom for the truth, the largest liberty for the right. No vendor of secret remedies was admitted, because of the ignorant presumption in which they were conceived and propagated; but, alas, that we should have fallen upon the evil times when "patented processes" are attempted, when "processes" of valuable remedies are kept secret. These remedies with "patent processes" are in daily use. This is one of the dark spots in the picture. It came in with the "legally qualified practitioner." What is antipyrin, antifebrin, salol, sulfonal? The reliant patient may well propound such questions. Who can answer them? Are we relegated at one fell move back into outer darkness, the associates of vendors of "secret remedies," of "patented processes?" What higher is a "patented process" than a "patented nostrum?" The profession was never so low as to countenance the latter; but have we not, in these latter days, become propagandists of patented and, therefore, secret processes?

LAWS FOR THE REGULATION OF THE PRACTICE OF MEDICINE.

It may be asked, has the standard of professional excellence been raised by laws enacted in many of the States for the regulation of the practice of medicine?

These laws banish the poor creatures without diplomas, but make respectable, *quasi*-respectable, all who have so-called diplomas from whatever source. Shams and pretenders are in this way made "legal," and claim whatever protection and recognition that term may give or imply. A chartered institution, in most of the States, represents a formal application for incorporation to a Secretary of State, the signature of that officer, and nothing more. The process of graduating from such—the faculty often consisting of but a single person, or a man and his wife—would hardly be called a farce; the subject is too serious. "Legally qualified!" think of it; and yet this legally qualified creature will claim and expect to meet the highest and the purest. Is this an advance upon the requirements of the Code, the morals and *esprit de corps* of which have never been questioned?

What has been the effect of these diplomas? Let any candid man answer. Have they not tended to make vice and presumptuous ignorance respectable?

Let us be true to ourselves; pitch cannot be touched without defilement. Our profession must be kept pure or else it will degenerate and sink to the level of a trade.

In State Boards of Health, by the side of physicians, we find these "legally qualified" practitioners. Where lies the responsibility? Is it with us? Our self-examination on this subject should be searching. If we have failed in our duties to humanity, let us be swift to acknowledge it, and be still more eager to correct our error.

The presence of this body of professional gentlemen, representing our entire country, furnishes sufficient argument for the existence of a National Organization; one embracing the virtue and strength of the profession, one to which all questions should be referred for just and final decision. Questions will arise, differences of opinion will occur between honest men. We must have some tribunal, some body, to which these questions, these differences of opinion, can be relegated for solution. The golden rule is a principle, not a law; it cannot interpret itself. Its application to life in detail must be defined. In this respect we are like other men and other organizations. Our *morale*, however, is higher; it has a zeal, a spirit, a hope and confidence peculiarly our own. If we would have our organization pure, we should make it strong—strong enough to eliminate all that is not true or truthful. We are mortals, not transcendentalists. We cannot live as the commune. We must have laws; remembering always that they are not made for the righteous, but for the sinner. "They that be whole need not a physician, but they that are sick." I will not attempt to defend the ethics of our profession. It would be a poor compliment to your intelligence, to your manhood; for there is not a clause in our Code which a gentleman could not cheerfully obey. Organize whatever we may please: Associations of Specialists, of Physicians, of Surgeons; Academies of Physicians; Congresses of Physicians and Surgeons; but let us not lose our loyalty to this parent Association. Projected almost half a century ago, when medical societies were few, it has annually convened—in the North, in the South, in the East, in the West, and in the far West, on the Pacific shore. If you will examine its yearly roster, you will find that it em-

braced the best and the wisest. Almost all who were present at the beginning are at rest; their places have been filled by worthy men. Thus yearly new life—new men being added—this Association can not grow old.

"When a people hold their lives and property as nothing, the enemy has already suffered defeat." So too, when virtue will not compromise with vice, the victory, although it may be long delayed, will surely come.

Of the American Medical Association, let us unite in saying, *esto perpetua.*

OUR DUTIES AS JOURNALISTS AND THE REFORMS WE SHOULD PERSISTENTLY ADVOCATE.

Presidential Address Delivered before the American Medical Editors' Association at its annual meeting held at Newport, R. I., June 23d, 1889.

BY WILLIAM C. WILE, A.M., M.D.,

OF DANBURY, CONN.,

EX-VICE-PRESIDENT OF THE AMERICAN MEDICAL ASSOCIATION, MEMBER OF THE BRITISH MEDICAL ASSOCIATION, EDITOR OF THE NEW ENGLAND MEDICAL MONTHLY, ETC.

To fill with satisfaction to myself, and with justice to you, the high office bestowed upon me by the Association of American Medical Editors, is a most difficult and embarassing task. The high rank and standing of the Society, its mighty influence throughout the land, to say nothing of the talent, the brilliancy and the scholarship of its individual members—all seem to demand of me certain special gifts and qualifications which I feel scarcely able to supply.

The most intelligent audience, however, is often the least given to criticism, hence I venture to address you with some slight degree of confidence, yet, at the same time, with a full appreciation of the honor conferred upon me.

It is useless to comment further upon the power which this Association may yield, not only as regards the medical profession of which it forms so important a part, but in other fields, where energy and influence are no less urgently demanded. It remains for me only to indicate the reforms which seem to be most urgently needed, with the full confidence that by the assistance afforded by the medical profession they will be brought to a happy termination.

What then shall be our line of action during the years to come? What changes should be inaugurated? What projects already undertaken should be carried on to completion? These are questions which it becomes us at this time to consider and decide upon. In their treatment, however, we are hampered by the superabundance of facts and suggestions which present themselves, and which by reason of their importance demand special consideration. Let us, however, study those requirements which may be held as essential to the prosperity and healthful growth of the medical profession.

The subject of medical education as it exists in the country to-day has been often commented upon and held up to criticism. It is a widely recognized fact that year after year there go forth from our colleges hundreds of young men who are totally and manifestly unqualified for the work before them. As candidates for admission, they are, in many cases, unfamiliar with the first principles of English composition, to say nothing of the other primary branches of learning. As graduates they have been found familiar with not one-half of the diseases observed in general practice, much less with the various specialties of medicine. Not only are such men allowed to enter the colleges, but they are solicited and encouraged so to do, by inducements without number, so that no one, of whatever race, nationality or condition, be he moral or immoral, ignorant or well informed, can have any plausible excuse for not studying medicine, and not taking a diploma after receiving two courses of lectures.

For these reasons our system of medical education has become unfavorably known throughout all foreign countries, and such reputation is working us irreparable injury. The present state of civilization demands for our profession not stock companies which derive their revenues wholly from the fees of their students, and which consequently make large pecuniary demands without any adequate returns, but rather, institutions which are able to exercise independence and can, to a certain extent, choose their own students, and can insist upon a four years' study of medicine. There should be three years of clinical work besides such instruction, with frequent examinations by the faculty, and no student should be awarded a diploma who has not a good knowledge of practical anatomy, surgery and obstetrics, as well as a fair clinical acquaintance with the various specialties of medicine. I believe that by proper legislation such a curriculum will be adopted and carried out by every college in the country, while the various mushroom institutions which now exist will be compelled to go into bankruptcy from lack of support.

To bring about such reforms is to excite much hostile feeling and adverse criticism, for both money and influence are pledged for the maintenance of diploma mills, and sympathy is often enlisted even for an unworthy cause; yet with the means at its disposal, it certainly lies in the power of the profession to protect itself and the public as well from the dangers which have been so long in active existence. Recognizing as we do the many shortcomings of the medical colleges and the men they graduate, it seems urgently required that some remedial measure should be at once advocated and put into operation.

We are practically aware of the fact that many of the existing laws governing the practice of medicine are of very limited application, and avail little as regards the suppression of quackery in its various forms, and the protection of the medical profession. Most harmful and disreputable systems of practice are thus allowed to exist and indeed to flourish, and it is difficult and at times impossible to secure the conviction of any one guilty of malpractice. Those who hold diplomas and are now engaged in medical work are, to a great extent, beyond our jurisdiction. It is in the prevention as much as in the treatment of these evils that we are specially concerned. To prohibit the manufacture of ignorant and unscrupulous practitioners, no less than to convict and punish those who already exist, should form our chief aim and purpose.

One of the measures which promises the best results is the establishment of State Boards of Medical Examiners, which might be appointed by the Governor of each State, upon the recommendation of its own medical society. To such bodies should be entrusted the sole licensing power, with the privilege of rejecting all applicants who are found to be notoriously incompetent. Such action has already been taken by at least four States, and in a modified form by five others, all of whom have recognized the fact that it is only in this way that satisfactory results may be attained. We have over one hundred medical colleges in the United States, and the number is steadily increasing. In most there are no preliminary examinations worth mentioning, indeed so great is the competition among the latter that the college which should presume to demand anything but money of the applicant would soon find itself supplanted by the great number who demand nothing at all.

Again, in the various schools of a higher grade there is a disposition to insist upon technical and purely theoretical points, and a disregard of the more practical aspects of medicine. To these various faults and deficiencies there may be applied a like remedy.

State examining boards requiring of the applicant a high standing of scholarship and a thoroughly practical acquaintance with the duties of the profession, would quickly eradicate the worthless institutions, would institute improved methods of instruction, and would enhance the value and the dignity of those medical schools of the first class which are now taking the lead in these measures of reform.

Thus with the increased preliminary requirements an extended and graded college course, with its many improved facilities for instruction, and the final test exercised by an independent examining board, there is an absolute certainty of limiting the number of schools and the number of graduates, and likewise of bringing to the profession a degree of dignity and status unequalled at any time in its past history.

The policy of protection holds good in the case of medical practitioners as well as in the importation of foreign labor and manufactures. While American physicians are prohibited by the most stringent laws and regulations from practicing in Europe, yet on the other hand, a foreigner with little or no education may come to this country and practice his calling without fear of molestation. The result is a large influx of incompetent and otherwise undesirable men, who come to join the three thousand or more graduates who are turned out yearly by the various medical colleges of this country. The laws governing the practice of medicine in Europe are most stringent and effective, and few, if any, enter the profession there before attaining a fair knowledge of its duties. In Germany, Russia, Switzerland, Italy, Spain, Portugal and other countries, a rigid state examination is demanded. In France the requirements are equally high, while in some parts of Europe the applicant for a license, in addition to his other qualifications, must be a naturalized citizen. In short, we have nothing in this part of the United States at least, which compares in efficacy with the requirements adopted by most other countries. The consequence is we receive upon our shores not only those who have failed to obtain licenses, but also those who have never applied for them; moreover, many of the medical immigrants have little or no knowledge of our institutions or language. They are foreign taught, and know nothing of American methods of treatment. For these latter reasons alone they should be debarred from practice. This state of affairs would, I believe, find an efficient remedy in the supervision exercised by the State Boards of Examiners, who might sit in judgment upon these cases as well, and thereby render their country a valuable service.

While the quack, the pretender, and the incompetent doctors demand, and often receive, fees which are quite out of proportion to the services rendered, the regular physician is too often defrauded of his just dues. In all other professions scientific work demands a more or less adequate compensation, and by virtue of existing safeguards satisfactory returns are generally made for services rendered. In the medical profession, however, there exists comparatively little protection against possible losses. The physician is at the mercy of the dishonest patron, and it is only after a long period of attendance, involving perhaps a great expenditure of physical and mental labor, to say nothing of loss of time, that he becomes aware of the moral and financial standing of his patient, who is oftentimes inclined to depreciate rather than extol the service which he has neglected to pay for.

This state of affairs has existed for years—the

patient going the rounds of the medical faculty and receiving advice and medicine gratis, while the physician suffers in reputation as well as in a pecuniary way. It is time that these acts of dishonesty meet with the punishment which they so richly deserve. During the last few years there has been an effort made in various localities to remedy this evil, and by a plan which has met with success wherever it has been adopted. I would advocate therefore, the establishment in every town and city of a Physicians' Protective Alliance, by which a complete record may be kept of all who are able but unwilling to pay for medical attendance, together with such other facts as occasion requires. With such a method in operation the receipts of the physician would be more in proportion to the amount of labor expended, and his services held in far greater estimation.

There has arisen no question of more vital importance than that which concerns the protection of our country from the invasion of contagious diseases. Yet it is a most singular fact that few civilized nations possess regulations which are so lax and inefficient as ours. Those which now obtain have been inaugurated after long, persistent and laborious effort. Although appropriations have been obtained from the government to be used in the time of need for the suppression of epidemics, yet by reason of the few existing laws and the many restrictions placed around them such sums cannot, and never will enable us to exercise the proper sanitary precautions. Under existing circumstances quarantine is maintained, if maintained at all, by individual States, whose laws possess no uniformity whatever. It has been stated that there are but three ports in this country where proper precautions are in force. The efficient quarantine of one port, however, not only fails at the present time to protect its own State, but really adds to the dangers of the adjoining States, which possess no safeguards. Given one harbor of entry, where infected vessels may repair, the quarantine of all others must necessarily prove of little avail, and it is apparent from this exposed condition of our coasts and the free intercourse existing between the States, we are in constant danger of infection from various sources. An occasional appropriation to be used in cases of emergency, when danger is imminent, fails utterly to meet our wants. At the same time it is not just that individual States, situated on the seaboard, should be compelled to bear the expense of protecting the inland States. Although by means of a large expenditure of money we have thus far protected many of our seaports, still many thousands of dollars have been foolishly wasted, and no permanent or definite results obtained. This applies not only from dangers from foreign sources, but also to those which arise in our midst, and by reason of faulty safeguards are allowed to increase and multiply and to extend from one community to another. It is important that the health laws of all towns, cities and States should be clearly defined and identical in their provisions, and at the same time readily executed. It seems wholly improper that the Marine Hospital Service should any longer attempt to carry on any portion of this important work, in fact it would be difficult to determine what special qualifications this department possesses that it should assume an interest in such matters and constitute itself an almoner of the health funds. It certainly has many and important duties of its own, and should therefore be allowed the time necessary for their proper performance. Upon reviewing the question, therefore, from its various standpoints, there appears to be no better way of remedying the numerous evils and shortcomings which exist than the establishment of a National Bureau of Health, which should form a distinct department of our national government, and to which should be entrusted the general supervision and enforcement of all measures relating to sanitation, as well as to coast and inter-State quarantine. The appropriations allowed this Board should be generous, and there should likewise exist a permanent fund which could be drawn upon in sudden emergencies which might arise.

Having secured in this way a general uniformity of all sanitary laws and regulations, with intelligent methods and with abundant means for carrying them into execution, we may expect more brilliant and lasting results than have heretofore been attained. In this Department of Health it would be highly proper that the chief executive officer be made a member of the cabinet as evidence of a proper appreciation of the dignity and importance of one of the most practical branches of human education and knowledge.

That the work of this Board may be carried on with the best results, and in order that there may always be found intelligent aid and coöperation, it is important that the students of all of our colleges should receive instruction in sanitary science. In this latter there has recently been a rapid advance, and in no other department of medicine have greater or more brilliant results been noted.

No specialty can be pursued with better and more definite results than this one, and as the most intractable and fatal diseases seem to be the very ones which are most easily averted, it follows that no practitioner who is unfamiliar with the first principles of this science, can perform his duties with the greatest profit to himself and with justice to his patients. In these matters the physician is, as a rule, wholly self-educated, and in the investigations he may wish to make, labors under disadvantages which a proper preliminary training would have obviated. So urgent, how-

ever, are the present demands of preventive medicine, that we have reason to hope that, with the necessary encouragement on our part, every medical college will be obliged to recognize their importance by establishing a chair of sanitary science, by which students may acquire all of the known facts relating to biology and allied topics, together with the necessary data for future investigations. Said an English writer more than thirty years ago, "Redoubled attention should be devoted to hygiene, both public and private, with a view of preventing disease on a large scale and individually in our sphere of practice. Here the surest and most glorious triumphs of medical practice are to be achieved." The discoveries which have been made and the results which have been attained during the past few years, are but the fulfilment of this prophecy, and should render the student more devoted to sanitary science than ever before.

Facilities for bacteriological work have been heretofore lacking, and American students in this department of science have been obliged to either carry on such investigations under the greatest possible difficulties at home, or to pursue their studies in the various laboratories abroad. Under such conditions we advance slowly and laboriously and can necessarily take little part in the triumphs of modern scientific research. A thorough knowledge of the causes and modes of propagation of disease, as well as the laws governing epidemics, must be acquired before we can use with intelligence whatever resources which may be placed at our disposal. We can now boast of six or seven private bacteriological laboratories, and there is reason to suppose that, if properly equipped and supported, they will do good and efficient work; yet, to meet the many and varied requirements of our Government, something more is needed. Our National health officials should be enabled to carry on the many kinds of investigations needed without assistance from foreign or outside sources, and such experiments should not be allowed to languish or fail through lack of time on the part of the officers or the need of funds to meet current expenses. In no other way can such sanitary work be prosecuted with success, than by the establishment of a bacteriological laboratory, forming an adjuvant to the Bureau of Health—liberally maintained by the Government and wholly devoted to the needs and demands of the latter. Many countries have set the example. We have only to commend a measure whose feasibility has been so fully established.

There could be no Association whose interests we hold so greatly at heart, as the one with which we are so intimately connected. Its triumphs and successes are no less our own, while for any failures or shortcomings it might manifest, we should hold ourselves in part responsible. We may then rightfully interest ourselves in those measures by which the aims of the American Medical Association are defined and furthered, and by which its honors and benefits are rendered free to the profession at large. As the official organ of the Association THE JOURNAL should obtain certain special features. We see too many elaborate and scientific articles, and those which are both uninteresting and far from practical. We are too often obliged to spend too much time in eliminating the great mass of verbiage and dry details with which a few plain facts are surrounded. A journal designed for the general medical reader has no right to fill its columns with articles upon optics, or cerebral localization, or pathological anatomy. Contributions which have their own proper place, should not be inflicted on the general practitioner to be read during the limited time at his disposal. The reports of medical societies may be placed in the same category. If they contain anything of special value let it be summarized and allowed no more space than it deserves. The Association does not require a journal which deals with special branches and investigations, but rather one which will give a comprehensive digest of medical progress and medical news, and at the same time possess such features as will render it popular and attractive.

The editor of such a publication should not be chosen without due care and deliberation, as the office is a most important and responsible one. It follows that, in addition to his other qualifications, he should be a man of liberal education, elevated thought and considerable executive ability. He should be able and willing to devote to the office the care and attention which it demands, without incurring the suspicion of having used it for the purpose of furthering his own private and personal interests. What applies to medical journalism as a whole, may be said to represent the needs and requirements of the official organ of the Association, and the realization of projects for its growth and improvement is, no doubt, a source of care and solicitude to all of us. In this, as in all matters which concern the future growth and prosperity of the American Medical Association, our support and loyalty are pledged. It is within our power to add materially to its usefulness and success, while at the same time we endeavor, by all possible means, to improve the present condition of the medical profession by elevating its standards and placing it upon a firmer moral and intellectual basis.

I have endeavored briefly to direct your attention to some of the more striking evils which now exist, and the measures which might be employed to overcome them. We have, at the present time, an important mission to perform, yet no one who fully appreciates the influence and the capabilities of this Society of Medical Editors, can justly despair of final success. We feel to a certain degree satisfied with the work which has already been

accomplished by our Association, and desire to show our appreciation of the evidences of esteem and encouragement which have been extended, yet no thought is more gratifying to us than the conviction that, in years to come, we shall have been found to have added our full quota to the triumphs and achievements enjoyed by the medical profession of America.

ADDRESS OF WELCOME.

BY J. H. ELDRIDGE, M.D.,
OF EAST GREENWICH, R. I.,
The Oldest Member of the Rhode Island Medical Society.

Having reached that bad eminence—the oldest in fellowship of our State Society—an honor which I share with my friend Dr. Turner, who will address you this evening, the Chairman of our Committee of Arrangements has assigned to me the very pleasant duty of greeting you, gentlemen of the American Medical Association, and giving you a cordial welcome in behalf of the profession of Rhode Island on this, Fortieth Annual Meeting, which you have done us the honor to hold in this State.

It goes without saying, that this is a very small State in point of territory. The most extravagant diminutive can hardly convey an idea of its proportions to those of you who come from without the limits of the New England States. We must also admit that the soil in many parts is barren, rough and unfit for cultivation, and in an agricultural point of view worthless. Nearly half its surface of one thousand square miles is in its primitive state of forest or brush-wood; and another large portion is covered by the waters of the bay.

With all this, which we ourselves see and must of necessity admit, and which must be apparent to the casual visitor, we have much in which we take a laudable pride. What nature has denied to us in some ways she has been lavish of in others. We are proud of the illustrious founder of our State and the inheritance of civil and religious liberty which we have received from him. We are proud of our historic record from the first settlement of the State, through all the wars, down to the present time, and of the heroic names which are associated with us and which belong to us, We are proud of this lovely city by the sea, of which so much will be told you by the gentlemen associated with me. We are especially proud of our Bay with its numerous indentations, islands, and headlands sloping everywhere green and fresh to the water's edge. We value very highly the great extent of shore bordering our tide-waters, measured by hundreds of miles, upon which we, the present natives, taught by the aborigines, have learned to depend for our chief supply of food, never failing, all seasons alike, the delicious bivalve of every kind everywhere abounding. No visitor is permitted to leave this State until he shall have tasted this healthful, delicious food prepared in the primitive Indian way.

This shore privilege, as it is called, is an important feature in our Bill of Rights. All below high-water is public property. If in your efforts to reach this public domain by the nearest route, you should commit a trespass by crossing some private grounds, you may be assured you will only be mulcted in nominal damages—if the trial is before a jury, especially a Kent County jury.

We take an especial pride in our institutions of learning. Our Brown University, our Free Public School system, our Free Public Libraries, in every town—recognized and partly supported by the State, and everywhere doing a good work—continuing and completing what the free school has begun. Nowhere can all this be seen in better condition, more successful operation, than in this good town of Newport.

In our industrial enterprises, to which we are indebted for our prosperity and wealth, our cotton mills, our foundries and machine shops, where you can see the natural fibre—wool or cotton—wrought into the finished fabric; where you can see the construction of the most powerful stationary or locomotive engines and machinery of every kind.

Notwithstanding the poverty of the soil and the rough, rocky surface which so generally prevails, we have some specimens of fancy farming and fancy breeding; and also planting of forest and fruit trees, which plainly show what we might have done if we had earlier turned our attention to these important matters.

All this, and more which I might speak of, is so convenient, so accessible by land or water on either side of the bay, that, in the *horæ subsecivæ*, from the more important affairs for which you are assembled here, you will find abundant opportunity to visit and examine for yourselves.

Among the original settlers and founders of this State were a goodly number of physicians, or chirurgeons, as they were then more commonly called. Dr. Turner will give you a very full historic sketch of the most prominent of these men in the Rhode Island settlement. Other men of the same stamp, maintaining the same position in the Providence plantations, were associated with them. The respect and consideration which these good men could claim, and which was everywhere granted to them, has been transmitted through many generations of worthy successors, until we of this day are enjoying the goodly fruits thereof.

You have then but to announce yourselves as physicians, as members of this convention, as visitors, delegates from other States or other countries, to find everything opened for your inspection, and to be received everywhere with a cordial welcome.

ADDRESS ON SURGERY.

Delivered at the Fortieth Annual Meeting of the American Medical Association, Newport, R. I., June 27, 1889.

BY PHINEAS S. CONNER, M.D.,
OF CINCINNATI, O.

The surgery of the century has been of three periods: the preanæsthetic, the anæsthetic and the modern one. Operative brilliancy characterized the first. The suffering inseparably connected with the use of the knife and the nervous depression resulting therefrom was to be limited chiefly by celerity of execution; hence, the swift moving hand was an essential part of the equipment of the fittest surgeon.

When, in the amphitheatre of the Massachusetts General Hospital, "the problem of surgical anæsthesia was definitively solved," a new period began. Pain was no more, and it was permitted to examine earlier and more thoroughly, to remove more extensively, and to operate successfully in regions previously altogether, or in great measure, beyond the reach of art. For twenty years or more, progress was in the line of diagnosis, of development of new and better methods of operating, of extension of the range of surgical interference. Time was no longer an element of prime importance, and the work was regarded as quickly enough done when well and thoroughly done—too much so, in fact, for not seldom the best interests of the patient have been jeopardized by unnecessary delay in execution, that would not have occurred but for the existing profound insensibility. But though operations in this anæsthetic period were without much of the terrors of the olden time, they yet fell far short of producing the wished for result in preservation of life and early restoration to health. Wound complications were still as ever the bane of surgery, and too often the wisest planned and best executed operation resulted in failure because of the supervention of one form or other of septic infection.

It is scarcely twenty years since patient investigation, careful experimentation and practical testing began to throw strong clear light upon that most obscure of the subjects of medical study, the causes of disease. As never before in the history of medicine, truly scientific methods of research have been adopted and pursued by a multitude of trained observers in all civilized countries, and surgery has entered upon its scientific period, in which operator and patient are profiting by the labors of the chemist, the botanist, the physiologist, the physician, equally with those of the practical and experimental surgeon. It seems but yesterday when Lister's early papers startled the world. It is but twenty-two years since the first one was published, yet what enormous advances since then in knowledge, in treatment, and in the field of operative interference. A new department of science, surgical bacteriology, has been created (for what was done prior to 1867 may for practical purposes be left out of consideration), and in its development has been worked out the mycotic origin of all those pathological processes looked upon as inseparable from traumatisms, or almost necessarily associated with them if severe. Suppurations, gangrene, septic infection, erysipelas, tetanus, we know to depend upon the presence or the action of one or other of definite organisms that may be isolated, cultivated and inoculated. Recognizing the cause, it has been comparatively easy to devise methods, more or less perfect in action, to prevent the development or neutralize the influence of it, and there has been worked out an antiseptic and aseptic wound treatment, the results of which are simply marvelous. But just here I must protest against the wisdom or the justice of the sweeping declarations of a few enthusiasts, who see in other than speedy recovery after injury or operation evidences of what they are pleased to consider criminal ignorance or neglect.

The existing strong probability that in any given case septic infection might be prevented, has given warrant for the performance of operations that in preaseptic days were not to be thought of.

Abdominal surgery, that so short a time ago meant scarcely more than the removal of an ovarian tumor too often carried until death was evidently fast approaching, now includes operations upon almost every part of each hollow and solid viscus, and laparotomy has taken its place as a safe, proper, and often indispensable prerequisite to the determination of obscure diseases. Penetrating and perforating gunshot wounds, so generally fatal when treated by rest and opium, have in at least forty cases been recovered from after section and suture, and there are now but few surgeons still unconvinced of the wisdom of early active interference. At our last meeting Senn's carefully elaborated and beautiful demonstrations set forth a means of determining the existence and location of intestinal wounds that if safe, as it has thus far seemed to be, will remove the greatest objection to laparotomy in these cases, the uncertainty in the earlier hours of bowel perforation—and prevent what otherwise will occur, the overlooking of one or more lesions. It is not to be expected that all or any close approximation to all of these very dangerous wounds will be saved by early operation, for great injury will ordinarily be produced by the bullet, be it large or small; but every case that recovers after section and suture may fairly be considered as rescued from an otherwise almost inevitable death. Unquestionably the laying open of the peritoneum and operating upon an abdominal organ has at times been carried too far. Useless work has been performed, and life has been sacrificed, for it is not true (so far certainly as operators in general are concerned) that abdominal section is in itself

without danger, doing no harm if it accomplishes no good. But not a day goes by that somewhere or other life is not prolonged and comfort secured by an intraperitoneal ligation, suture, anastomosis or excision, rendered proper, may we not say possible, only by the aseptic results of scientific discovery and experimentation.

So, too, the diseases and injuries of the other great cavities are being attacked by the surgeon's knife guided by the diagnostic knowledge, the localizing exactness and the technical skill of the physician, the physiologist and the vivisector.

There has been but a beginning of intrathoracic surgery, though for years empyemas have been treated by free incisions, supplemented not seldom by extensive excisions of portions of the chest wall, and even in preaseptic days deeply lodged foreign bodies were removed. Only very recently has the lung been cut into for the evacuation of abscesses and the treatment of gangrenous areas, such pneumonotomies resulting favorably in one-half of the reported cases; and as yet but few subpleural tumors have been attacked. There is every reason for believing that in the near future surgery will be able to render great service to the subjects of not a few forms of thoracic disease now regarded as beyond the reach of art.

The most recent and the most brilliant triumphs have been in the treatment of diseases and injuries of the brain and cord. Nowhere else have our art and science so joined hands in affording relief as here. Tumors removed, foreign bodies taken away and their tracks drained, convulsion-centres excised, serous effusions tapped, life preserved and comfort secured; so reads the record. Much remains to be done in the determination of the trouble, the exact localization of the mischief, the perfection of technique. Not seldom mistakes will be made, errors committed; but it will be more and more demonstrated that the trained mind and the skilful hand, working together, can recognize and successfully treat otherwise irremediable affections within the skull and the spinal column.

As the operative procedures necessary for the exposure and removal of the spinous processes and laminæ of the vertebræ are but little dangerous, and as septic meningitis can almost certainly be prevented, a change may reasonably be looked for in the treatment of vertebral fractures, especially those in the lower half of the column. Up to this time the cases in which active interference has been made have almost always been those of long duration, in which existing inflammatory changes in the cord, if nothing worse, could not but prevent any favorable result; but even in these, of late, the patient has been none the worse for the operation. Without doubt, early removal of pressure, whether made by bone or blood it matters not, would save many an one from all those deplorable conditions consequent upon myelitis with which we are unfortunately too familiar.

Is there any good reason why spine fractures should not be treated as skull fractures? and who would now for a moment think of rest and position as the routine treatment of the latter injuries?

But in this scientific period there has been much more accomplished than extension of the range of operative interference, great and important as this has been. As never before it has been possible to preserve damaged parts and to retain important functions, to replace completely detached pieces of bone and secure adhesion as perfect as of the fragments in a simple fracture, to transfer large areas of integument and ingraft pieces of bone, to supply deficiencies in soft or hard parts by skin or bone from dog, rabbit, chicken or frog. Every department of conservative surgery has been and will yet more be benefited by the preventing of the evils consequent upon the action of minute organisms.

The two diseases that produce the widest destruction to part and to life are tuberculosis and cancer. The former, that until the discovery of its causative bacillus was regarded as of rare occurrence in parts belonging to the domain of surgery, is now known to be the producer of the vast proportion of the diseases of bones and joints, and of many of those attacking the skin and more external organs.

Primarily and often for a long time local, if allowed to go on unchecked, it effects other and remote regions, perhaps rapidly becoming generalized. But what has been learned respecting it —that it may attack any part the blood circulation in which is disturbed by general enfeeblement or local injury of ordinarily not severe character; that the bacilli may be destroyed or become encapsulated; that the softened tissues may, in like manner, be taken up and carried off or shut in temporarily or permanently; that if the diseased focus be completely removed, as it often may, the part and the whole are as if it had never existed, except so far as function is disturbed by the loss of what has been taken away, and by the scar tissue resulting? How has treatment been affected by this knowledge? It is of prime importance that early diagnosis be made. Located in bone or joint and detected while yet limited, prolonged rest, as absolute as possible, will in the majority of cases, certainly in young subjects, secure destruction, absorption or encapsulation of organisms or affected cells with resulting restoration to health. Advanced to the stage of caseation and liquefaction, rest may yet be followed by recovery, though ordinarily free drainage, with or without associated removal of the infected tissue, will be of great advantage. Injection of agents such as iodoform or the acid phosphate of lime, that will destroy the bacilli and the tuberculous masses, may produce the wished for cure. But ordinarily it will be better, indeed generally

necessary, to remove the affected area either by formal or informal excision or by amputation. Whether diseased joints are best treated by arthrectomies or by typical excisions is one of the questions still *sub judice*, though in the last three years, as never before, it has been shown that formal removals of the larger articulations can, in a large proportion of cases, be followed by early repair and solidification without suppuration or constitutional disturbance; even at times with recovery of original function. Though it is not likely that it can ever be said with truth that the days of the lame and the hump-backed have gone by, because of neglect, delay, or generalization of the pathological process, yet we have good reason to believe that further advances in knowledge of the development and extension of the tuberculous disease will enable the surgeons of the future to so limit, ameliorate and cure the surgical tuberculous affections, as that they will no longer constitute one of the most important and destructive of the external diseases.

Of cancer it may with truth be said we know very little; yet of nothing do we more need knowledge. Much less often met with than tuberculous disease, it is yet of not infrequent occurrence. In our eight largest cities (Boston, New York, Brooklyn, Philadelphia, Baltimore, Chicago, St. Louis, and Cincinnati) during the five years ending Dec. 31, 1888, of 599,684 deaths from all causes 13,094 were from cancer, 2.18 per cent., and as we all know the disease is not peculiarly an urban one. In five of the eight cities, New York, Chicago, Cincinnati, Brooklyn and St. Louis, the death rate was much the same, being in the order given 2.1, 2, 2, 1.94, 1.93 per cent. In Boston it was highest, being 2.98 per cent; in Baltimore it was 2.4 per cent., and in Philadelphia 2.28 per cent. In Cincinnati in the last year the percentage reached 2.6 per cent., while in 1868 it was but 0.55; an altogether exceptional rate, however, as only once since has it fallen below 1 per cent., in 1870, when it was 0.8. For these figures I am indebted to the health officer, Dr. Stanton. One in fifty then of the deaths in an aggregate city population of over five millions is due to this disease, and if we have regard only to the mortality of those within the cancer age, *i.e.*, more than 35 years old, about one in twenty of the deaths is thus produced. Even among the carefully selected adult individuals carrying life insurance, who are free or are supposed to be, from family predisposition to cancer, from 2.5 to 3.5 per cent. of the mortality is from this disease The statistics just mentioned and, particularly the marked contrast between the high death rate in Boston and the low one in St. Louis, gave but little support to the theory of Haviland, that low lying lands subject to frequent overflows are those in which the disease is most prevalent.

In preparing the mortality statistics of the census of 1880, Dr. Billings found that the disease was most prevalent in New England and Southern California, and least so in the South and upon the Mississippi. It is to be hoped that in the preparation of the vital statistics of the next census such attention may be given to this subject of occurrence and distribution, and such full and complete reports secured as will add materially to our knowledge, and go far towards determining to the correctness or incorrectness of the views of the English writer named. Care should be taken to separate, if possible, cases of sarcoma from those of cancer.

Hirsch to the contrary notwithstanding, this affection is becoming more common throughout the civilized world, certainly is so in our own country and in Great Britain. Increased accuracy of diagnosis will not account for a doubling in twenty years of its mortality rate in Massachusetts or in Cincinnati, or in less than twice twenty years in England. Frequently, if not usually, attacking individuals in good general health (though oftentimes appearing soon after a period of marked mental anxiety and depression), it has regard neither to social conditions nor hygienic surroundings. Unlike consumption, which is often of limited duration ending in recovery and at the worst, ordinarily bringing death gently, cancer left to itself very rarely is spontaneously eliminated, is almost inevitably destructive to part and to life, and is often attended with severe physical and mental suffering.

What is its starting point. An unused long-dormant embryonic cell, at length aroused to activity by local irritation, general enfeeblement or nervous exhaustion? In all probability, no. An abnormal epithelial development, abnormal because unconfined within its normal limits? But why unconfined. An epithelial cell undergoing proper degenerative changes, but arrested at some point short of its complete alteration? What stops its retrograde movement. Is it of mycotic origin? That it should be so would hardly be more strange than that lupus or lepra should be. That it is so has not yet been proved. The many investigations that have been made, some of them for a time apparently fruitful, have thus far failed to discover a causative bacillus, unless further and extended cultivations and inoculations shall prove that Kubasoff has actually found it. Experimental inoculations have again and again produced no specific result, but Lampiasi has claimed that by using a bacillus culture from the blood he succeeded in causing in a healthy part of the patient's skin the growth of a nodule having "an alveolar stroma with wide meshes, which contained many epithelial cells of different form and sizes;" and Hanan has twice successfully transplanted from rat to rat.

No more inviting field is open to the bacteri-

ologists and experimenters of our country (and we have a number of them, as also well equipped laboratories), than this very one of cancer. Cases are numerous, specimens are being daily secured, and there is no reason why America should not now do full part in settling the vexed questions of nature and origin. The imperative necessities of a struggle for existence, and the intense practicality of a new and developing country have heretofore prevented any but the very few filled with enthusiasm or independent of fortune from engaging in purely scientific studies involving minute investigation and patient labor with often no apparent practical outcome. But the times are changing, and the profession of our country may, and doubtless will ere long be as well and favorably known in biological research as it has been, and is in relation to ovariotomy, to ether, to the hip, to the treatment of stone, to the surgical diseases of women, to abdominal section, to a multitude of affections, and the means of treating them.

As we see it in lip or breast, or uterus or stomach, or it matters not what part or organ, is cancer a local disease, or but a local manifestation of a constitutional state? The question is still an open one, though the great majority of pathologists and clinicians are now agreed that wherever seated it is primarily, and for a time purely local, whatever may be the general conditions inherited or acquired that permit or favor its development. If not of limited area and capable of complete removal, operative interference can be justified only on the ground of affording temporary relief —unfortunately all that is accomplished in the majority of cases submitted to the knife. But there is great encouragement in the knowledge that a certain percentage of patients operated upon do recover; that is remain free from recurrence for three or more years; and that this percentage is larger or smaller, according as the disease is so situated as to be early detected and thoroughly removed, or the contrary. Located in the lower lip or the cervix uteri, for example, two out of five patients operated upon get well, in the breast one in eight. Why this great difference. Because, we may believe, of the site itself and of the degree and rapidity of extension, in parts immediately adjacent and of glandular involvement; in other words, of the likelihood of early and the possibility of complete extirpation, or the opposite. How are to be regarded those cases in which after five, ten or twenty years of apparently perfect health, the disease again shows itself and destroys life? As of long quiescence of infected and infecting cells or of a new and independent affection. The latter explanation certainly makes a far less demand upon our credulity, and it is no more strange that there should be a second than a first attack in a person and tissues possessing and undetermined and unknown receptivity, and such there certainly must be that cancer may be developed at all

Of nothing are we more certain than of the immense advantage there is in early recognition and speedy removal; and, on the other hand, of the utter uselessness, so far at least as the ultimate result is concerned, of any surgical interference after a wide extension has taken place.

In perfecting, therefore, the means of establishing diagnosis at an early day lies an important work in the future. Though consideration of age, of location, of pre-existing long-continued irritation, go far towards settling the nature of a given tumor, and upon such estimation of probabilities action may generally be safely taken, yet, as a rule, certainty of the character of the growth can only be had after scientific determination of its anatomical constitution. Whatever then makes it possible to safely, easily and without pain remove for microscopic examination, a sufficiently extensive piece of the mass to show its deep as well as superficial structure is of much practical value. A convenient and promising little instrument has lately been given to the profession by Dr. Collins Warren, of Boston.

Physiological and chemical investigations have furnished us with early and reliable evidence of the existence of cancer of the stomach in absence of the hydrochloric acid from the secretions of that viscus; may not kindred investigations give us like aid when other organs are affected?

The modern and scientific wound treatment now enables the surgeon to remove more extensively and at the same time safely, so that active interference may reasonably be expected to be, and is attended with much better results, than could be looked for a few years ago. Much of the work, though that in the last decade has been done upon internal cancers, has been of questionable utility; chiefly because of its late performance.

What will the future reveal respecting the non-operative treatment? Will a drug or drugs be found to secure destruction and removal of the morbid mass? May the moderate continued electric current or powerful interrupted currents "flashed through" prove to produce as has been claimed for them, entire disappearance of the diseased cells? Can some pathogenic organism be inoculated that without killing the patient will break down the malignant growth? We all know what has been done with the micrococcus of erysipelas.

In nothing could this Association do more than in determining by collective investigation and thorough committee work the frequency of occurrence of carcinoma in the country as a whole, and in its several States, the relation borne (if any) to geological formation, the age of appearance, the relative affection of parts and organs, the influence of therapeutic treatment, and the duration of

life with and without operation. Five years of such work would suffice to accumulate a mass of statistics of very great value, the study of which could not but advance the best interests of patients and practitioners; and in this, as in everything else "many hands make light work." To physicians, surgeons and therapeutists, the subject is one of prime importance, and only by combined scientific and practical work can it be determined what excites and produces the disease, and what can secure its relief.

As we survey the advances, etiological, diagnostic and therapeutic, made in the few years just past, that are of the scientific period, and consider, even in the most hurried way, the problems that are yet awaiting solution, problems relating to nature, origin and treatment of the diseases and injuries of parts within the domain of surgery, what may we not reasonably anticipate as the future of our science and art. Accidents must occur, diseases will prevail, no matter how great the triumphs of preventive medicine. Surgical pathology is but in its infancy. Years ago it was declared that operative surgery had reached its climax. Yet, since then, operations have over and again been done within abdomen, chest, and skull, upon the larynx, throat and spinal cord that in boldness of conception and brilliancy of execution have no parallel in the history of medicine. The end is not yet, nor will it be while, the world over, there are active minds and cunning hands busied with the determination of the existence and extent of surgical affections, and ready and able to remove them, aided more and more by the labors of investigators in many departments of science, general as well as medical. Year by year, he who may deliver the Address on Surgery will be able to report doubts removed, discoveries made, remedies employed and operations done.

ADDRESS OF THE CHAIRMAN OF THE SECTION ON THE PRACTICE OF MEDICINE, MATERIA MEDICA AND PHYSIOLOGY.

Delivered at the Fortieth Annual Meeting of the American Medical Association, June 25, 1889.

BY FREDERICK C. SHATTUCK, M.D.,
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In obedience to the rule of the Association that the Chairman of each Section shall review the progress which the year has brought in those subjects which immediately concern his Section, I ask your attention to a very brief consideration of a few of the large number of topics which might worthily find notice here.

The practice of medicine, materia medica and physiology include so much, the workers are so many, and the fruits of their labors are so varied and abundant that the difficulty of selection is itself an embarrassment.

The grass had scarcely grown on the grave of the treatment of pulmonary tuberculosis by gaseous enemata before another curative method was advocated by Weigert[1], Halter[2], and Krull;[3] a method which would seem at first sight to have claims to be called curative in that it is designed to remove the cause of the disease by destroying the bacilli *in situ*. We know that the development of this particular microbe is arrested at a temperature of 107° F.; and if, then, the intra-pulmonary temperature can be raised to or above this point and there maintained for a time the happiest results must follow. I can confirm the statements of the originators of this method as to the ability of patients to breathe with impunity air at a surprisingly high temperature. I have myself inhaled it at 320° F., and seen patients inhale it at 428° F., without notable inconvenience. Nearly six months ago Dr. G. G. Sears, of Boston, began to practice inhalations of hot air on some of my patients in the House of the Good Samaritan. His results are now ready for publication, and it will suffice to say here that an apparatus was used devised by Mr. G. L. Kingsley, of the Harvard Medical School, an apparatus which can be made by any coppersmith for $5—that patented by Weigert costs in this country $75—and that we are satisfied that the problem of intra-pulmonary direct germicidal action is still unsolved.

The pancreas, an organ the diseases of which have been until recently of pathological rather than clinical interest, is being dragged from obscurity. Senn's work on cysts of the pancreas is followed up by Fitz,[4] who has collected 70 cases of the several forms of acute inflammation of the organ and subjected them to a rigid analysis, which yields a notable increase to our knowledge. A frequent cause of acute pancreatitis seems to be the extension of an inflammation from the duodenum into the pancreatic duct and thence to the interstitial tissue of the organ; which tissue stands in such relation to the peritoneum, the retroperitoneal and retropancreatic fat tissues, as to permit the ready passage of bacteria, and thus account for the peritonitis and disseminated fat necrosis so often resulting from pancreatic inflammation. Inflammation of this organ is doubtless much more common than has hitherto been generally supposed, and is not impossible of diagnosis. The affections with which it is most likely to be confounded, are, irritant poisoning, perforating gastric or duodenal ulcer, perforation from gallstones, and acute intestinal obstruction. The first three can be excluded by the history of the case

[1] N. Y. Med. Record, 1888, ii, p. 693.
[2] Berl. Klin. Wochenschrift, 1888, Nos. 36-38.
[3] Berl. Klin. Wochenschrift, 1888, No. 39.
[4] The Middleton Goldsmith Lecture for 1889. Boston Med. and Surg. Journal, 1889, pp. 181, 205 and 229.

and the associated symptoms; the last by determining the potency of the large intestine through injection, by the seat of pain and tenderness of the upper abdomen, and by the absence of marked tympanites. I trust that I may be pardoned here for bringing in my own personal experience, which I do with the less hesitation, inasmuch as it is not especially to my credit. It was my lot during the past winter to be one of six physicians and surgeons at a consultation; four of us considered the case as probably acute intestinal obstruction, one inclined to perforation, while Dr. Fitz alone held that it was acute pancreatitis, and advised against operation. Laparotomy was done, no obstruction was found, and multiple fat necrosis was seen in the omentum, and the autopsy revealed acute hæmorrhagic pancreatitis.

Frerichs[5] long ago noticed the frequency of atrophy of the pancreas in diabetes mellitus; and Lancreaux in a recent and important paper calls attention to the relation between these conditions, based on 20 cases which he has seen, with post-mortem verification in 14 of these. Pancreatic diabetes, in contradistinction from the other forms of the affection, is characterized by sudden onset, rapid course, and severity of the symptoms, with great emaciation. In two of the cases, by the way, epigastric colic lead to the diagnosis of pancreatic calculus, and the autopsies brought justification.

Here we may allude to the experiments of Pavloff and Smirnoff,[6] which show that in rabbits, whose pancreatic ducts have been ligated, regeneration of the gland may take place after a new and spontaneous communication with the intestine has been formed.

The much vexed question as to the nature of diabetic coma, with the indications for the liability of its occurrence in any particular case, and the means for its relief are ably considered by Kirstein,[7] who details the steps through which our present knowledge has been attained. In certain cases of diabetes the organism seems to have lost the power of burning the fatty acids, largely β-oxy-butyric acid, to their normal end products. These cases are characterized by a large increase in the amount of ammonia in the urine, rather than by any striking symptoms or complex of symptoms, and these are the cases in which coma is to be dreaded; this form of coma being the result of the formation of larger amounts of free acid than can be neutralized by the ammonia which the organism is capable of supplying, the consequent abstraction from the blood of the fixed alkalies, and thus toxæmia.

The quantitative estimation of ammonia in the urine of diabetics is consequently of great importance therapeutically as well as for prognosis; but unfortunately a method for this estimation readily applicable to clinical purposes, is still lacking. When this large excess of ammonia is found the indications are to restrict the acid—rather than the sugar-forming foods, meats for instance—and to give alkalies freely. On the advent of the peculiar dyspnœa, which is apt to be the first symptom of coma, alkaline intravenous injection is to be practiced, as has already been done in a small number of cases, Minkowski alone having saved his patient.

The diseases of the blood have been studied by Graeber, Hunter, and others. According to Graeber[8] anæmia, chlorosis and pernicious anæmia are distinguishable from one another by a count of the red corpuscles and a hæmoglobin estimation. Hunter[9] argues to show that pernicious anæmia is an entity, pathological and clinical; depends on increased blood destruction, probably in the liver; and is to be differentiated from all grave anæmias, as, for instance, those of cancer and intestinal parasites, as well as from all other primary anæmias, by the greatly increased amount of blood pigment, responding to the micro-chemical tests for iron, found in the liver in this affection. The spleen contains no such excess of iron as does the liver; and, in the latter organ, the seat of the pigment is chiefly the outer portions and cells of the lobules, not the capillaries, a fact which goes to show that the blood destruction takes place in the liver itself, the pigment entering the cells in soluble form—hæmoglobin—and there undergoing conversion into albuminate of iron. In all cases where the blood destruction takes place elsewhere than in the liver, and pigment is deposited in that organ, it accumulates in and about the capillaries.

A paper of MacMunn,[10] of Wolverhampton, on Addison's disease is noteworthy. He has studied the adrenals and urine of patients with this disease, spectroscopically; and, reviewing our knowledge of the subject, concludes that the function of the adrenal bodies is the removal from the circulation of worn-out pigments and their accompanying proteids. "When the adrenals are diseased these effete pigments and effete proteids circulate in the blood; the former, or their incomplete metabolites, producing pigmentation of the skin and mucous membrane, and appearing often in the urine as urohæmatoporphyrin; the latter producing tonic effects, and leading to further deterioration of the blood with its consequences."

At our meeting in Cincinnati, last year, a discussion took place on the modern method of diagnosis of diseases of the stomach; and high hopes were expressed that by the examination of the gastric contents, an ease and certainty of diagnosis in these affections is almost within our reach

[5] Bull. de l'Acad. de Médecine, 1888, Tom. xix, 3 Sér. p. 588.
[6] Lancet, 1888, i, p. 999.
[7] Deutsch. Med. Wochenschrift, April 11, 1889.
[8] Fortschrift der medicin, July 15, 1888.
[9] Practitioner, Aug., 1888, and Lancet, 1888, Sept. 22, 29 and Oct. 6
[10] British Med. Journal, Feb. 4, 1888.

comparable to that which urinary analysis yields in renal diseases. The more carefully the question is studied, the greater is the demand for yet further study, and the more clearly does the necessity appear for the exercise of great caution in the formation of definite conclusions at present. In the first place, it is now seen that the only single test for free hydrochloric acid which has a real clinical value, is the phloroglucin-vanillin; the tropæolin, congo red, methyl violet, and other tests, either reacting to other acids or acid salts, or being often prevented from reacting by albuminoids, even when free hydrochloric acid is present. Secondly, it gradually appears that it is not safe to base a diagnosis of gastric cancer on even the persistent absence of this acid from the gastric contents withdrawn an hour after a test meal. Such absence is indicative of notable impairment of the functional activity of the mucous membrane, as from a severe catarrhal condition; or of extensive destruction of the secretory glands of the stomach, largely irrespective of the cause of the destruction. Thus, in a case of cancer sharply localized and unaccompanied by catarrh to any marked degree, free hydrochloric acid may be found in sufficient amount until the cachexia is well advanced. On the other hand, in severe but simple catarrh, especially if attended by the formation of much mucus; in atrophy of the gastric tubules; in amyloid disease of the organ; after strong caustics have done their work; even in certain cases of impaired innervation; no free hydrochloric acid may be detected, though sought for repeatedly with the utmost skill and the aid of every appliance and reagent.

It also appears that hyperacidity though a frequent, is by no means a constant accompaniment of peptic ulcer.

Indeed it is impressed upon us that the pathology of an organ which varies so widely physiologically in the same individual within such short periods of time is a very complicated thing and the lesson is again enforced that it is not in pathognomonic signs, but in careful weighing of each piece of evidence and in the painstaking collocation of them all that accurate diagnosis is to be attained. Before leaving this subject I must say a word in praise of Ewald's remarkable work on Diseases of the Stomach,[11] and of the balance which he preserves while enthusiastically pursuing his subject.

During the past year the internal antipyretics have continued to seek their level. It is seen that they exert no curative influence on specific febrile processes; and, as we recognize more and more clearly that even continued fever is not productive of the changes in the parenchymatous organs with which we credited it of late years, but that the danger in these processes lies rather in the effects of toxic alkaloids on the nervous centers than in temperature elevation, as we recognize this fact, we appreciate how irrational it is to address our therapeusis chiefly to pyrexia. When the fever is in itself productive of discomfort to the patient the internal antipyretics are useful; but the indications seem to me, at least, strong that the antineuralgic and analgesic will survive the antipyretic application of this class of drugs.

On the other hand, it seems probable that the cold-bath treatment, if continued, and especially of typhoid fever, must be adopted and conscientiously carried out in this country. As the principles of Brand's methods gain headway in France, a country not prejudiced in favor of German leadership, as Brand's results are confirmed by other observers, and in other countries, and in the face of such statistics as are put into our language by H. C. Wood,[12] Wilson,[13] and Baruch,[14] it is difficult to see how a people who prides itself on its wealth, general intelligence and practical qualities can be longer deterred by skepticism, or motives of convenience and economy, from the adoption of a method of treatment which reduces the mortality of typhoid fever to 3 per cent.

The hypnotics, sulphonal and amylene hydrate, have come into more general use, and prove themselves to be valuable additions to our list of remedies of this class. Unpleasant effects seem rare, while the slow absorption of the one, and the rapid action of the other give each a place.

The treatment of locomotor ataxia by suspension [accidentally hit upon by Motchonkowsky, of Odessa, who was struck by the benefit derived by a tabetic patient, also suffering from spinal curvature, after the suspension required in applying a plaster jacket] has spread with great rapidity, and is being thoroughly tested in this as well as in other countries: It is still too early to determine how useful it will prove to an unfortunate class of patients.

Morton Prince[15] was led by his duties as examiner of applicants for the Boston Fire Department, and by the frequency with which he heard temporary murmurs in vigorous men, to a study of their mode of origin. It has been believed for some years that in debilitated states leakage may take place through the mitral valve, the curtains of which are not tightly closed by reason of the insufficient force of the ventricular contraction. It will be at once appreciated that Prince's cases were the reverse of debilitated; and his ingenious explanation of the murmurs heard in them is that under conditions of great excitement, such as many of the applicants presented, the valve may be forced by ventricular contractions of a power disproportioned to the resistance of the valve. It is not easy to detect a flaw in his argument,

[11] Klinik der Verdanungskrankheiten, Bd. ii, Berlin, 1888.

[12] Therapeutics, Its Principles and Practice. Seventh Ed., 1888, p. 58, et seq.

[13] Annual of the Med. Sciences, 1889, Vol. i.

[14] N. Y. Medical Record, 1889, i, p. 434.

[15] N. Y. Med. Record, 1889, i, p. 421. Boston Med. and Surg. Journal, 1889, p. 109, et seq.

and it seems as if he had made an important addition to our knowledge.

There are many other subjects of which I should like to speak did time permit and were the programme less attractive. Very likely another in my place would have selected quite a different series of topics. The highly-important and interesting subject of cerebral localization, for instance, has not been mentioned. But the work which has been done in that direction the past year has been rather in popularizing previous studies, and in the application of their results to practical surgery, than in new discovery.

Prudden's[16] studies of diphtheria and the constancy with which he finds a streptococcus in diphtheritic lesions deserves more than passing mention. So also, Hare's[17] Fothergillian Prize Essay on "Mediastinal Diseases."

To sum up the results of the year, it may be stated that it has been one of real, though not of brilliant progress. Knowledge has been advanced almost all along the line, more in some parts than in others; bacteriology in its broad sense, including the chemical poisons generated by or accompanying the microbes, as well as the identification and life history of the organisms, offering an enormous field for patient research.

One fact seems to me to stand out in strong relief, namely, that our countrymen are on the high-road leading to the attainment of a reputation for scientific research equal to that which they have long enjoyed in the more immediately practical branches of medicine and surgery.

The future glows with a promise which the achievements of the past assure us will be realized, and it is the part of each one of us, if he cannot discover, at least to do all that in him lies to make the highest and best use of the discoveries of others more gifted than himself.

ORIGINAL ARTICLES.

TWO CASES OF UPWARD DISLOCATION OF THE STERNAL END OF THE CLAVICLE.

BY S. T. ARMSTRONG, M.D., PH.D.,
PASSED ASSISTANT SURGEON U. S. MARINE-HOSPITAL SERVICE.

The comparative rarity of this dislocation, Hamilton[1] mentioning but eleven cases, may justify the publication of the following cases:

Case 1.—Jas. Davidson, æt. 41, a native of Scotland, was admitted to the U. S. Marine Hospital, New York, on October 16, 1888, for necrosis of the frontal bone. In examining the patient it was found that he had an old upward dislocation of the sternal end of the clavicle. The patient stated that in 1881 he fell from a wagon, striking the wheel with his right shoulder in falling. Though severely jarred for a few moments, he felt no severe pain in the shoulder or sternal region, and was not obliged to consult a physician. A machinist by trade; in resuming his occupation the day after his fall, he noticed that in hammering with his right arm he would often miss hitting his chisel fairly. So aggravated did this condition become that he was discharged as incompetent.

Thinking that the accident might have caused his trouble, he consulted a physician some two weeks after the fall, and was informed that the collar bone was dislocated, but that it was too late to do anything to benefit him. As his right arm was apparently as strong as the left he secured employment on a vessel.

The arm has always been servicable. Examination of the chest showed a slight prominence of the sternal end of the right clavicle, that was increased when the arm was extended above the head. If the arm was extended posteriorly there was a slight projection of the bone forward. If the arm was extended anteriorly there was a marked projection of the extremity of the bone, and a knotting of the pectoral muscles beneath it. Moving the arm to the opposite shoulder, the bone glided along the upper margin of the sternum, and could be made to almost touch the opposite clavicle. No movement of the head affected the position of the bone. As the motion in hammering, with the machinist, is largely from the shoulder, there was constant motion of the dislocated extremity; and failure of the pectoralis to have a proper base of support, made the contraction of that muscle in depressing the arm irregular, and hence the failure to strike a true blow with the tool.

The extreme mobility of the sternal extremity leads to the belief that there was originally a laceration of all the surrounding ligaments. There may be partial reformation of the costo-clavicular ligament, but it seems probable that the bone is now held *in situ* by the subclavius muscle.

Case 2.—O. Anderson, æt. 39 years, a native of Sweden, was admitted to the hospital April 10, 1889. During a storm at sea, on April 7, a heavy wave struck the vessel he was employed on, and he was thrown against a bulwark; he was unconscious for some time, and on regaining his senses felt a severe pain in his right shoulder and arm, and spit up blood. When admitted to the hospital, a fracture of the right ulna was found. There was emphysema of the right chest, axilla, and shoulder. The right post clavicular fossa was obliterated, and crepitation occurred on pressure here, as well as to the external to the scapula. From this and the pulmonary hæmorrhage a fracture of the ribs posteriorly was diagnosticated,

[16] Am. Jour. Med. Science, March and April, 1889.
[17] Philadelphia, Blakiston, 1889.
[1] Fractures and Dislocations. 1884. Page 671.

though the site could not be determined as it was covered by the scapula. The sternal extremity of the right clavicle was dislocated upward, and rested on the upper margin of the manubrium sterni; by pressure it could be reduced, but it would gradually slip upward and forward again.

The condition of the patient was such that any attempt at fixation of the dislocated bone was precluded. The patient was kept on his back for two weeks, the fracture of the forearm securing immobilization of the arm. When allowed to sit up the arm was placed in a handkerchief sling, and on May 6, he was discharged recovered.

The sternal end of the clavicle projected, but there seemed to have been a partial reformation of the ligaments, and the range of mobility, of the dislocation was slight. Of course, with constant use, it is possible that the dislocation may be aggravated, but it is improbable that the use of the arm will be interfered with.

These cases simply verify the reported cases: that retention of the dislocation is practically impossible, and that in no case did it impair the usefulness of the arm. Each of the cases were verified by the staff of the hospital.

MEDICAL PROGRESS.

BACTERIA IN GREEN SPUTA.—The occurrence of green sputa is a well-known fact. Formerly all such cases were described by the same name, the green coloring substance was declared to be biliverdin, and in all cases where green sputum was observed, "bilious pneumonia" was diagnosed. At Traube's instigation Nothnagel investigated this symptom in the sixties. He arrived at the conclusion that green sputa might originate either from actual admixture of bile coloring substance into the sputa—and this occurs every time when an affection of the respiratory apparatus accompanied by spitting exists with icterus, irrespective of the cause for the latter, consequently not only in pneumonia but also in common bronchitis—or from transformation of a blood coloring matter into a green coloring substance. Nothnagel, who declares that the rust-color of the pneumonic sputa is an early stage of this transformation process, found the last stage, the green color, when the sputum was allowed to remain stagnant for awhile; for instance, in pneumonia terminating in abscess of the lungs, and in subacute catarrhal pneumonia. Later Elliot and Janssen observed a green sputum evidently belonging to this second category in a case of sarcoma of the lungs.

Attention has repeatedly been called to the fact that there are sputa which immediately after expectoration do not show any traces of green color, but which in a few days assume a beautiful green color. Escherich, Curschmann and Rosenbach have described such sputa. A similar process, in which, however, a yellow color takes the place of the green, was described by Löwer and Traube. The fact that such coloring occurred chiefly in summer, generally wandering in hospital wards from one cuspidor to another, suggested the action of microörganisms as a cause. Especially Rosenbach claimed bacteriological origin for it. Under the microscope he found in his sputa numerous ovoid bodies, small and glittering, which he regarded as bacteria spores. These he thought were the causes, and at the same time the carriers of the coloring substance.

Curschmann, who also investigated the subject, found no trace of bacteria. Nor has thorough examination of this subject, on the basis of our present attainments in bacteriology, ever been made.

Dr. Fricke finally availed himself of an opportunity to do so during an epidemic of green sputa which occurred in the Canton Hospital in Zurich in the spring of 1888. The sputum of a patient with chronic bronchitis had been taken from the medical male ward to the laboratory for the purpose of microscopical investigation. In three days it had assumed a bright green color. Later the sputum of the same patient became green once more, this time in the ward. A few weeks afterwards the patient had to be transferred to the surgical male ward because of hernia, and a few days afterwards the green sputum of a tuberculous patient who had been operated on in the same ward for empyema was shown to Dr. Fricke. It is just possible that there was an etiological connection between the two cases, although the two patients were not in the same room. At about the same time a green sputum from an incipient case of phthisis in the female ward was submitted. The sputa of this last patient for six weeks became green every time that it was left standing for a few days; afterwards the phenomenon suddenly disappeared. Finally one more sample of a sporadic case of green sputum was sent to Dr. Fricke.

At first Dr. Fricke made attempts at vaccination. Into the sputa of various diseases he introduced traces of green sputa, and in two or three days obtained a green color in the former, it making little difference in what disease they originated. Pneumonia sputa turned almost without exception a dark olive-green, sputa of bronchitis assumed a grassy color. Watery or foamy sputa colored badly, and sputa from cavities colored the worst of all. In short, the tendency to change appeared to depend principally upon the physical qualities.

These experiments already proved almost with certainty that microörganisms were the cause of the color. Dr. Fricke now examined all these sputa by means of Koch's plate cultures, and

found in all of them, without exception (besides diverse bacteria which did not produce any coloring matter, and to which he consequently paid no further attention), the same bacillus which upon artificial soil produced a shining green coloring substance, and which, transferred from the pure culture to sputa, produced in them the green color as regularly as the original sputa. Fricke considers, therefore, this bacillus as the only cause of the green coloring substance.

For the non-success in vaccinating certain sputa physical, chemical or bacteriological causes may be held responsible. By the latter Fricke refers to primary occurrence of such bacteria in sputum which do not harmonize with the coloring bacillus, which are antagonistic to the latter. He examined the conduct of the tubercle bacilli in this respect, and found that sputa containing the tubercle bacilli turn green the same as others. He therefore ascribes no clinical significance to the occurrence of the green coloring, as it depends solely upon qualities of the sputa wholly unimportant clinically, and upon the purely accidental entrance of the bacillus. The latter is about the form and size of the typhus bacillus, and having the same brisk motion. It is strictly acrobic. It has no pathogenic qualities.

The coloring substance is not in the bacilli proper, but in the culture media in their vicinity. The production of the coloring matter is not a vital function of the bacillus, Dr. Fricke being able to raise rather a luxuriant growth of them on artificial soil without their producing the coloring substance. It is difficult to obtain the coloring matter in large quantities and still more difficult to produce it in its pure state, as it is insoluble in alcohol, ether, chloroform, etc., but dissolves easily in water and alkali, and is therefore not easy to separate from salts. For this reason an analysis could not be made.

Supplementary to this question Fricke studied all bacilli producing green color which he could obtain. He had cultures sent him from the institutions in Göttingen and Berlin, and thus was able to cultivate beside one another seven different bacilli, six of which produce, when fresh, a shining grassy-green coloring matter; when old, a dirty yellowish-brown color substance which, however, always retains a beautiful green fluorescence, whilst the color substance of the seventh, the *bac. pyocyaneus β* of Ernst, is at first similar to the other, but through shaking with oxygen or through standing for a long time in the air, becomes dark green and finally almost black. The two coloring substances also differ in their relations to acids. The *β* substance turns red like litmus, the *α* matter is completely deprived of color. Alkalies restore to both the original green color.

Three of the seven bacilli dissolve gelatine; they are all known: *Bac. pyocyaneus α*, *β*, and *B. fluorescens liquefaciens*. Four leave the gelatine unchanged; of these two are movable, two immovable. These differ again in the form of the colonies on the different media. Of the bacilli not dissolving gelatine two are identical with descriptions in the literature: that out of sputa with *Bac. fluorescens putidus auct.* (Flügge), another with *Bac. fluorescens auct.* (Eisenberg); two others have not yet been described. There is also in literature the description of a *Bac. erythrosporus* which likewise produces a green coloring substance, and which distinguishes itself by the formation of large, dirty-red spores. None of the seven kinds above mentioned agreeing with this description, there are consequently eight kinds.

Fricke vaccinated all seven upon sputa, and in all except *Bac. pyocyaneus β* green coloring of the sputa resulted. Consequently one or another of these bacilli might be found in other cases of green sputum.—*Correspondenz-Blatt für Schweizer Aerzte*, No. 9, 1889.

PATHOGENY OF THE ROUND ULCER OF THE STOMACH.—There are numerous theories on this subject. According to that most generally accepted there are two factors active in the development of the simple ulcer: a dyscrasic influence, a modification of crasia, such as is found in certain forms of anæmia and in chlorosis, and accidental local influences which produce hæmorrhagic or other ulcerations in the superficial layers of the inner surface of the stomach.

Ingesta may act in both forms, as modifiers of the blood crasia, or as local irritants. It would be interesting to know the relations existing between the different regimens and the occurrence of round ulcer. M. VON SOHLERN has made an investigation in this direction, having sent inquiries to a number of Russian physicians and pathologists to ascertain whether there is any truth in the claim that round ulcer is very rare in a certain part of Russia. The answers received all agree in confirming that statement. As an illustration some statistics furnished by Mr. Winogranoff, prosector at the Obuchow Hospital in St. Petersburg, are given here. In about 900 autopsies which are made every year in this hospital, only one or two cases of round ulcer are found. M. Pétersen, prosector at the Alexander Hospital, found only three cases of round ulcer in about 6,000 autopsies.

Information gathered by the author from physicians practicing in the Rhön and the Bavarian Alps, two districts in Bavaria, establishes also with surprising certainty the extreme rarity of round ulcer in these two regions. In Russia as well as the two Bavarian districts, the food of the inhabitants is almost exclusively of a vegetable character; meat is consumed only in exceptional cases. The climatic conditions in the two countries differ greatly, the food, too, is quite unlike.

There is only one thing common to the countries where round ulcer is rarely found, and that is the great proportion of potash in the food. To this circumstance the inhabitants of those countries would seem to be indebted for their immunity from round ulcer.—*Gazette Médicale de Paris*, No. 18, 1889.

INHALATION OF CHLOROFORM IN DISEASES OF THE HEART AND OF THE LUNGS.—PROF. ROSENBACH recommends warmly (*Jour. de méd. de Paris*) inhalations of chloroform in all those cases of lung or heart disease where the other narcotics, as, for instance, morphia, chloral, etc., act too slowly, or where their use is followed by disagreeable secondary symptoms. The method employed by him is as follows. From 5 to 15 gr. of chloroform are put on wadding placed in a funnel, and the patient slowly inhales the vapors from the funnel, which is held at a certain distance from the mouth and nose. As the chloroform is mixed with air there is no danger to be apprehended. The patient at first experiences a disagreeable sensation in the pharynx, but this soon passes off, the patient makes several deep inhalations which produce a feeling of well-being, and sometimes even produce sleep. The author never observed any harmful secondary symptoms ascribable to this treatment.

Chloroform inhalations are indicated in all attacks of dyspnœa of cardiac or pulmonary origin, but especially in emphysema, cardiac asthma, and in heart disease. Good results have also been obtained where they were employed for the attacks so common with phthisical patients. People who previously had been passing their nights absolutely sleepless, slept quite well after resort to the inhalations. Satisfactory results are also obtained in hiccough and in acute cardialgic attacks; in these latter cases, however, morphia is preferable. It deserves to be mentioned that the author succeeded sometimes in breaking up attacks of pulmonary œdema. He also thinks it useful to bathe the tuberculous ulcers of the larynx with a watery solution of chloroform, the improvement ensuing being due, in his opinion, partly to the analgesic and greatly to the antiparasitic action of the chloroform.—*Revue Médicale de l'Est*, No. 9, 1889.

AORTIC INSUFFICIENCY.—TIMOFEJEW expresses his opinion on this subject (*Berl. Klin. Wochenschrift*, June 11, 1888) as follows: 1. The diastolic murmur of aortic insufficiency can completely disappear and be replaced by the second normal tone. 2. The intensity of the diastolic murmur depends entirely (*a*) upon the degree of insufficiency, (*b*) upon the blood pressure in the aorta. 3. The blood pressure diminishes considerably in the course of valvular affections of the heart. 4. The second tone in the carotid of dogs in which an aortic insufficiency has been produced, often disappears after a longer or shorter period. 5. The second murmur, which is heard sometimes on a level with the carotid in patients afflicted with aortic insufficiency, is a symptom of purely local origin, and not the continuation of a murmur from the base of the heart. 6. The first murmur which is heard sometimes in aortic insufficiency on a level with the carotid may have a purely local origin.

Rosenbach, however, arrived at contrary conclusions (*Berl. Klin. Woch.*, Sept. 17, 1888). He says: 1. The conditions causing the murmur after artificial destruction of the aortic valve differ essentially in the dog and the rabbit. In the former the murmur is irregular, and may be lacking or disappear in the course of observation, whilst in the latter it is constant and intense. 2. This difference is due to the circumstance that there never occurs precipitation of fibrin upon the injured organs in rabbits, whilst in dogs fibrin-deposits are numerous enough to make up temporarily for the loss of valvular substance. 3. Intra-arterial pressure has no noticeable influence on the intensity of the diastolic murmur, which is chiefly produced by the aspiration of the ventricle dilated by the diastole. 4. The production of the systolic murmur in aortic insufficiency must be ascribed to the backward flow caused, at the beginning of the aorta, by the aspiration of the left ventricle, which current must be overcome by the ventricular contents liberated in the moment of systole.—*Revue des Sciences Médicales*, No. 66, 1889.

ON DORSAL TABES AND EXOPHTHALMIC GOITRE.—BARIÉ reports the history of a patient who was affected with various troubles: on the one hand the symptoms of tabes, lightning pains, Romberg's symptom, cessation of the patellar reflex, plantar anæsthesia, incoördination of movements, vertigo, gastric crises; on the other hand the symptoms of Basedow's disease; protrusion of the eye, tachycardia, hypertrophy of the heart, swelling of the thyroid, trembling, polyuria, etc. From this complex of symptoms he concluded that in the course of tabes the classical symptoms of exophthalmic goitre may appear, that these phenomena are the expression not of a disease developing parallel but of a pathological complexus lying in the centers of the medulla; he compares exophthalmic goitre in tabes to the bulbar troubles described by Pierret and Joffroy; he admits that goitre may be a symptom not of the highest stage but of the beginning of tabes which is doubtless related to a simple congestive hyperæmia, and will yield to the use of ergot and faradisation. (*Soc. Méd. des Hôp.*, Dec. 14, 1888). Joffroy reports in brief the cases of seven women afflicted with tabes, all of whom showed tachycardia, whilst six had ocular protrusion, and two

thyroid tumor. He does not share the opinion of Barié, but thinks that the diseases of Basedow and Duchenne may be seen combined in the same individual; he admits, however, that ataxy may sometimes give way to tachycardia, and perhaps to a slight protrusion of the eye.—*Revue des Sciences Médicales*, No. 66, 1889.

MUSCULAR ATROPHY IN ATAXIA.—DÉJERINE found in 106 ataxic patients in his practice in Bicêtre, 11 presenting progressive muscular atrophy. He reports 5 clinical cases with autopsy and histological investigation. He concludes that in most cases muscular atrophy in patients with tabes results from neuritis of the peripheral motor-nerves: there exist consequently, besides the cutaneous sensitive neuritis already described by him in 1882, motor-neuritis having much in common with the former; both of them are the more pronounced the farther away from the centres the trunks of the nerves are examined; both of them are also of a peripheral character, for, in the cutaneous neuritis, the spinal ganglions are not affected the same as the interior horns, which are intact in the motor neuritis. The latter should therefore be considered henceforth as belonging to posterior sclerosis, the symptomatology of which they may change in certain cases. (*C. R. Soc. Biol.*, February 25, 1888). Apropos of the investigations of Déjerine regarding the peripheral nature of muscular atrophy in tabes, Joffroy cites several cases of Charcot, Pierret, Londoléon, and of his own practice, in which this atrophy was accompanied either by a lesion in one spot or by a lesion spread out over the motor nerve cells of the anterior horns. Déjerine is of the opinion that in these cases there existed coincidently an acute tephromyelitis, sub-acute or chronic, with ataxy, but not a genuine muscular atrophy in tabes, which can only result from a neuritis of the peripheral motor-nerves.—*Revue des Sciences Médicales*, No. 66, 1889.

NORMAL AND PATHOLOGICAL CONDITIONS OF GANGLIONS IN THE HUMAN HEART.—ADOLPH OTT in the "Prager Zeitschrift für Heilkunde," Bd. ix., p. 271, says that ganglion cells are most frequently found in the septum atriorum, that is in its front or rear section, where it is thickest, its thinner middle portion scarcely containing any at all. But also in the circumference of the ventricles, especially in the rear portion, and preferably in that portion of the right ventricle located between the aortic and the pulmonary arteries, the ventricles do not contain any ganglions. The ganglion cells lie principally in the subpericardial connective tissue, but occur also scattered through the muscles. An examination of thirty hearts for pathological changes of the ganglion cells showed that they occur in two types: 1. As a progressive change-growth of connective tissue between the cells and the nuclei of the Sheath of Schwana with formation of a tissue at first granular subsequently coarsely fibrous; besides in the advanced stages of this process fatty degeneration and compression of the ganglion cells; and secondly, as an acute parenchymatous degeneration of these cells. The former change is found in those cases which lead to stoppage and changes in size in the heart, the latter in complete qualitative alteration of the blood (uræmia, sepsis, etc.) Definite relations between changes of the ganglions and degeneration of the heart muscles cannot be proven. A causal connection between the changes in the heart, microscopically perceivable, and those of the ganglions exist only inasmuch as the stoppage of the blood causing hyperplasia of all tissues in the heart seems to favor also the growth of connective-tissue substances in the ganglions and its consequences. For clinical purposes the result of the investigation do not furnish any material which would allow of drawing a conclusion from the heart action as observed during life upon the pathological conditions of the ganglions of the heart, or which permit an influence upon the action of the heart, *i. e.*, its frequency or rhythm on the part of the changed ganglions to be recognized.—*Centralblatt für Klinische Medicin*, No. 15, 1889.

POISONING BY PTOMAINES.—M. MERVEILLE reports a case where a family was poisoned by eating bouillon which was only one day old, but had been kept in a bedroom and had not been boiled over. The symptoms of the patients were very similar to those of cholera: incessant vomiting, abundant rice-like stools, cramps in the limbs, cyanosis, etc. The condition of the patients was very serious, but all recovered. This was evidently a case of poisoning by ptomaines which had formed in bouillon made of sound meat, large quantities of the soup having been eaten on the first day without causing any trouble whatever. —*Gazette Médicale*, No. 32, 1889.

ON TUBERCULOSIS OF THE LUNGS IN SUGAR-DIABETES.—A. BAGOU shows that phthisis in diabetic patients is always of a tubercular character, whatever its clinical form may be. Whether acute or chronic, or pneumonic or ulcerative; it always has the bacillus for an anatomical substratum which invades the organism all the more easily as it finds it debilitated with the impregnation with sugar. The immediate cause for tuberculosis in diabetes is the diminution of resistance of the organism. Clinically it is specially characteristic of this kind of phthisis to appear insidiously to cause but little hæmoptysis, little febrile reaction, hardly any perspiration. But from a prognostic standpoint it is of the most malignant type as it never improves.—*Revue des Sciences Médicales*, No. 66, 1889.

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SATURDAY, JULY 6, 1889.

FORTIETH ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION.

The first General Session of the Association assembled in the Music Hall at the hour named upon the programme. The meeting was called to order by the Chairman of the Committee of Arrangements, Dr. H. R. Storer, of Newport, who presented the President of the Association, Dr. W. W. Dawson. After prayer by the venerable Dr. Thayer, the senior clergyman of Newport, letters of regret were read from the following: Vice-President L. P. Morton; Hon. J. W. Noble, Secretary of the Interior; Hon. B. F. Tracy, Secretary of War; Hon. John Wanamaker, Postmaster-General; Hon. W. Windom, Secretary of the Treasury; Drs. Stillé, E. H. Gregory, Ex-Presidents of the Association; Dr. H. I. Bowditch, of Boston; Dr. W. B. Geikie, Dean of Trinity Medical College, Toronto; Dr. Montizambert, Medical Superintendent at Grosse Isle, Quebec; Sir James Grant, M.D., Ottawa, Can.; Sir Charles Tupper, M.D., Minister of Marine and Fisheries, Can.; Dr. P. H. Bryce, Provincial Board of Health, Ontario; Professor James C. Cameron, Montreal; and others.

Various letters of invitation were then read, one of the most important being that from the Faculty of Harvard University inviting the members of the Association to visit the College on their return home.

The Hon. H. W. Ladd, Governor of Rhode Island, addressed the Association in terms of welcome. He said that Rhode Island was noted for its hospitality, and that the Association would find that its reputation would be maintained in that instance.

The Hon. Jas. H. Eldridge, M.D., of East Greenwich, welcomed the Association in the name of the profession of the State of Rhode Island (See p. 14).

The Presidential Address, a full report of which may be found in the fore part of this issue of THE JOURNAL, was read by Dr. J. A. Larrabee, of Louisville. Dr. Dawson, the President, though present, found himself unequal to the task of delivering it on account of ill-health.

The proceedings of the second day were opened with prayer by the Rt. Rev. T. M. Clark, Bishop of Rhode Island. After the reading of announcements and the report of elections to the Nominating Committee, an Address on Medicine was delivered by Dr. Wm. Pepper, Provost of the University of Pennsylvania.

Dr. Pepper's address consisted of an interesting account of the life and labors of Dr. Benj. Rush, together with an eulogy of his character. The address was a most eloquent tribute to the memory of the first of our great American physicians. Dr. Pepper reviewed his life in considerable detail, but dwelt more upon his personal characteristics and the part he played in the contemporaneous history of his times, pointing out the manifold character of his work as a statesman, a literateur, a reformer and, most of all, a physician. As a medical officer of the Army, as the projector of the Philadelphia Dispensary, as a political, social, and medical reformer, his work was of the highest character. His essay on "The Physical Influence on the Moral Faculty" occupies a classical position in the literature of medicine. His efforts in opposition to capital punishment, slavery, intemperance, and the use of tobacco were of the most earnest and effective nature. He drew much of his inspiration from his friend, Franklin, as well as from his great teacher, Sydenham. He was not only a master of literary style but a most eloquent and effective speaker. He was an active and progressive educator. Through all his writings there runs a vein of piety free from sectarianism. After 1789 the greater part of his work was medical, while the most interesting part of his life was that subsequent to his election to the University of Pennsylvania. From this date,

1789, to the date of his death, 1813, the history of his life is the history of American medicine—the "Era of Rush." As a medical teacher he was unrivaled for simplicity. His history of the epidemic of 1793 is one of the very best ever published. Dr. Pepper fears that in these days refinement in diagnosis and the study of disease often leads to the loss of valuable time, and that Sydenham's belief that the prompt treatment of disease in its incipiency is one of the most important elements in our success as physicians, as it was in the case of his pupil Rush. Our own resources are much greater now than were theirs in the last century. We are often in danger from too great refinement. They had few and trusted remedies. We have many remedies for every symptom and do not thoroughly learn the use of any of them.

Dr. Gihon, U. S. N., Chairman of the Rush Monument Committee, then presented his annual report. He regretted that the Committee could not report progress, and feared that the members would not live to see the fruition of hopes indulged five years ago when the Committee was appointed. The treasurer had only received $1,000. After a most energetic appeal to the whole profession for aid in this important movement, he announced that the dollar limit had been abandoned and that sums of any amount would be received. In the midst of much enthusiasm the sum of $264.50 was soon added to the fund.

The debate on adoption of amendments to Constitution then followed.

The amendment to strike out the last clause of Sec. VII, relating to individually affixing names to the Constitution and regulations of this Association, was adopted.

The amendment proposed by Dr. Moyer, referring to changes in the Constitution of the Sections, was indefinitely postponed.

After a lively debate the resolution affecting the personal duties of the General Committee was lost.

The proceedings of the third day were opened with prayer by the Rev. James Coyle, (R. C.) of Newport.

The Address on General Surgery was then given by Dr. Phineas S. Conner, of Cincinnati, and will be found reported in full in this issue of THE JOURNAL.

Dr. R. J. Dunglison, of Philadelphia, presented his annual report as Treasurer which showed the Association to be in satisfactory financial condition.

The Nominating Committee then made their report, after which it was decided to hold the next meeting at Nashville, Tenn., on the third Tuesday in May, 1890.

The following officers were elected: President, E. M. Moore, of New York; First Vice-President, J. W. Jackson, of Missouri; Second Vice-President, W. W. Kimball, of Minnesota; Third Vice-President, J. H. Warren, of Massachusetts; Fourth Vice-President, T. B. Evans, of Maryland; Treasurer, R. J. Dunglison, of Pennsylvania; Permanent Secretary, W. B. Atkinson, of Pennsylvania; Librarian, C. H. A. Kleinschmidt, D. C. To deliver Address on General Medicine: Dr. N. S. Davis, of Illinois; General Surgery, Hunter McGuire, of Virginia; State Medicine, Alfred L. Carroll, of New York.

The Hon. Geo. Bancroft, and Sir James Grant, of Ottawa, were then presented to the Association, the latter making a few remarks in which he dwelt upon the advances made during the past half century in the treatment of insanity, and referred to the advances made in the surgery of the thorax. The subjects of medical education and examination were touched upon, and he recommended that the best way to weed out irregular practitioners is to require "a rigid preliminary training."

The fourth day's proceedings were opened with prayer by the Rev. D. A. Jordan, (M.E.), after which Dr. W. H. Welch, of Baltimore, delivered the Address on State Medicine, a full report of which will be published in a future issue of THE JOURNAL.

Dr. J. M. Toner, Chairman of the Committee on Necrology, presented his annual report.

The full Official Report of the Proceedings of the Fortieth Annual Meeting of the Association will be published in THE JOURNAL as soon as received from the Permanent Secretary, Dr. W. K. Atkinson, of Philadelphia.

THE WEEKLY MEDICAL REVIEW, of St. Louis, will be enlarged to the size of the *New York Medical Journal.*

EDITORIAL NOTES.

HOME.

UNIVERSITY OF PENNSYLVANIA.—The Associate professorships of Obstetrics in the Medical Department of the University will be consolidated and Dr. Barton C. Hirst elected as Professor of Obstetrics. Dr. William Goodell will continue his duties as Professor of Gynecology.

THE MEDICAL SOCIETY OF THE STATE OF WEST VIRGINIA will hold its twenty-second annual meeting at White Sulphur Springs from July 17–19, 1889. Full particulars as to railroad arrangements, etc., may be learned on application to the Secretary, Dr. J. L. Fullerton, Charleston, W. Va.

THE CHICAGO POLICLINIC is now an assured success. The enterprising Faculty have commenced the erection of a handsome four-story structure on Chicago avenue, west of Wells street. The exterior will be constructed of brick and stone, and the interior finished in hardwood and heated by steam. It will cost $25,000 and will be completed in about four weeks.

THE OHIO STATE MEDICAL SOCIETY.—At the forty-fourth annual session of this Society, recently held in Youngstown, O., the following gentlemen were elected officers: President, Dr. John McCurdy, of Youngstown; Vice-Presidents, Drs. J. W. Conklin, of Dayton; A. W. Ridenour, of Massillon; C. W. Tangerman, of Cincinnati; J. E. Woodbridge, of Youngstown; Secretary, Dr. G. A. Collamore, of Toledo; Assistant Secretary, Dr. E. C. Brush, of Zanesville; Treasurer and Librarian, Dr. T. W. Jones, of Columbus. The next meeting will be held at Columbus, the first Wednesday in June, 1890.

FOREIGN.

DR. QUAIN, F.R.S., has received the appointment of physician-extraordinary to Queen Victoria.

PROF. LÖWENTHAL has received a special mission from the French Government to proceed to Tonquin to study the effects of salol on cholera patients.

THE TENTH INTERNATIONAL MEDICAL CONGRESS.—Professors Virchow, von Bergmann, and Waldeyer have charge of the preliminary work for the next Congress, and are actively engaged in maturing plans to make it a great success. There will be a conference of delegates from all the medical bodies in Germany at Heidelberg in September. It is likely the Congress will commence its proceedings on August 6, 1890.

IN FRANCE death by electricity has fascinated the French. The Parisians have petitioned the Municipal Council of Paris to substitute the electric current for the guillotine as a more merciful method of capital punishment. The meteorological observatory on the Eiffel Tower is now at work. The direction and force of the wind, the moisture and dryness of the atmosphere, the variations of temperature, cloud observations and weather forecasts will be minutely recorded, and the reports placarded in the Exhibition buildings proper.

IN ITALY Prof. Taurini recently successfully performed total extirpation of the clavicle for myxo-sarcoma. Several prominent members of the medical profession have recently died: Enrico Albanese, professor of clinical surgery in the University of Palermo, died of Addison's disease on April 8; Dr. Davis Maragliano, professor of psychiatrics in the University of Genoa; Dr. Luigi Barzanò, a pioneer of electro-therapeutics in Italy; Dr. E. Bonamici, lecturer on materia medica and toxicology at Florence; and Dr. A. De Marchi Gherini, the leading surgeon in Milan.

IN EGYPT the epidemic of typhus fever has almost entirely yielded to energetic measures. Small-pox is prevalent. Dr. Hassan Pacha Mahmoud claims to be the discoverer of an affection which he names *bouton d'Egypte*. He states that the *bouton* is peculiar to Egypt, is non-contagious, contains no trace of microbe, differs from an ordinary furuncle, is superficial, leaves no traces on the skin, may last from twelve to fourteen years, and owes its origin to the action of the air and sun. Rabies is present in Egypt. In Cairo and Helouan 13,326 dogs have been poisoned within fifteen months.

IN INDIA the Government is taking stringent precautions against the spread of leprosy, and it is proposed to empower the district magistrates to arrest any leper found wandering about without means of subsistence. These may be detained in a retreat for life. Every retreat is to provide for the complete separation of the sexes. Great dis-

tress prevails in some districts. In Ganjam, where the situation is worst, no drinking water remains in the tanks, and cholera is epidemic throughout the district.

SOCIETY PROCEEDINGS.

American Medical Editors' Association.

Annual Meeting, held at Newport, R. I., June 23, 1889.

W. C. WILE, M.D., PRESIDENT, IN THE CHAIR.

The American Medical Editors' Association met at 8:30 P.M. The meeting was called to order by the President, Dr. Wm. C. Wile.

DR. WM. BRODIE, of Detroit, was invited to occupy the Chair during the reading of the *Presidential Address.*

(See page 10.)

In the discussion which ensued DR. BRODIE, of Detroit, said he thought there were too many journals and too few good journalists. There is too much work done with the scissors. Many good papers are lost by being published in short-lived journals. He believed that THE JOURNAL of the Association should be conducted on a thoroughly impersonal plan, in which the identity of the editor is wholly lost to view. THE JOURNAL had done much good work in killing off other journals of little value.

DR. DULLES, of Philadelphia, said he believed it the duty of medical editors to foster good journals and kill the bad ones. He emphasized the necessity of maintaining a high ethical and literary standard and of promoting brotherhood in the profession.

DR. LEARTUS CONNOR, of Detroit, believed that idealism in medical journalism does not pay. Some of the most wretched journals pay the best. He was reminded of the tobacco manufacturer who said that if one would be rich he should pander to the *vices* of the people.

DR. I. N. LOVE, of St. Louis, did not take the same pessimistic views that some of the other speakers had expressed. He believed that Darwin's law holds good in journalism as in animal life.

DR. N. S. DAVIS, of Chicago, in his most vigorous manner rebuked the patronizing of foreign schools to the neglect of our own, and asserted that one-fourth of the money expended by our students in foreign countries would serve to perfect our own valuable institutions.

DR. T. D. CROTHERS, of Hartford, read a paper on

THE INFLUENCE OF MEDICAL JOURNALISM ON THE MARCH OF SCIENCE.

He believed that the influence of the medical journal could scarcely be overestimated. Medical journals may be divided into three classes: the general, the special, and the encyclopædic, each of which has its own value. Quarterlies are doomed, while the others are constantly increasing their usefulness. At present the weekly journal is the type, but in the near future we may look for the medical daily.

DR. PANCOAST, of Philadelphia, said he deplored the failure to report the daily work of the clinics. The weekly journal should be a mirror of the medical and surgical work done in the clinics of each community. We look to the journal for the knowledge we need in our daily work. He does not share in the pessimistic views expressed by some of the journalists present but on the other hand had much reason to praise our own journals and criticise those of foreign lands.

DR. CONNOR dwelt on the necessity of putting well-digested materials before the readers, but warned his hearers against the danger of emasculating good articles by cutting them down.

DR. WAUGH, of Philadelphia, found little in what had been said during the discussion with which he could agree. What is ideal reading for one cannot be ideal for all. As for special journals, there are not specialists enough to support them, whereas culled special matter may well enliven the columns of a general journal.

DR. STORER, of Newport, found much satisfaction in the thought that the plan which he indorsed eighteen years ago, of founding a weekly journal as the organ of the American Medical Association had met with such great success.

DOMESTIC CORRESPONDENCE.

LETTER FROM NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

The Academy of Medicine; Dr. P. A. Morrow relates some Personal Observations of Leprosy—Discussion on the Danger of the spread of Leprosy.

At the last scientific meeting of the Academy of Medicine for the present season Dr. P. A. Morrow gave some interesting personal observations of leprosy, recently made in Mexico and the Sandwich Islands, with magic lantern illustrations of typical cases. He said that leprosy was too often looked upon as possessing only a historic interest, like the plague and other diseases of former times. It would not do, however, to so regard it. Unfortunately, it was a living reality, and a map representing the geographical distribution of the disease would show that it extended over fully

one-third the surface of the globe. This general distribution, he believed, had a very important bearing upon its etiology. It was impossible to give the exact number of lepers at present in the world, but in India alone there were certainly not less than 150,000.

The importation of leprosy from a country where the disease was endemic to one where it had been previously unknown, he said, could always be traced to the agency of personal contact. In our own country the cases of the disease could be traced to three or four distinct sources. In Louisiana it had been introduced by the Acadians when they settled there in 1758. In Iowa, Wisconsin, Minnesota and Illinois it had been introduced by Scandinavian immigrants; and in California and Oregon by the Chinese. He had recently become aware of the hitherto unknown existence of the disease in Great Salt Lake City, where it had been brought by natives of the Sandwich Islands.

Dr. Morrow's personal observations began in New Orleans, where Dr. Blanc reported the existence of forty-two cases last year; these being entirely independent of the lepers of the Teche River district of Louisiana. In Mexico leprosy had existed ever since the time of Cortez, who established a lazaretto which continued in use until about thirty years ago. Since that time lepers had been cared for in the general hospitals, and numbers of these people might be met with in the streets of Mexico at any time. At San Francisco he saw quite a number of cases; six of them being in the pest-house there. The Sandwich Islands, he thought, offered probably the best field in the world for the study of leprosy, on account of the comparatively recent origin and great prevalence of the disease there. Segregation had been secured by the establishment of an isolated leper settlement, and there were now more than 11,000 cases at it.

It was only within the last twenty-five years, he went on to say, that the true character of leprosy has been ascertained. We now know that it is a parasitic disease; and the bacillus lepra discovered by Hansen presents certain analogies to the tubercle bacillus. This is particularly true as regards its remarkable vital tenacity. Like all specific microbes, it has an elective affinity for certain fluids and tissues of the body. As regards the origin of leprosy, he said it could be stated positively that the disease never originated spontaneously. It does not attach to the soil, water or food, but is always communicated from an individual, and can always be traced to personal contact. Its period of incubation is a long one. This is variously stated at from three to five years, but in certain instances seems to be from ten to fifteen years. It is a very difficult matter to arrive at the exact period of incubation, because there is no initial lesion, and the prodromal symptoms are very indefinite. The progress of the disease is slow, but it almost invariably terminates fatally.

There are several moot points in regard to the disease, and the first of these is as to its contagiousness. This has never been at all questioned until comparatively recent times; but about thirty years ago it began to be doubted. It is worthy of note, Dr. Morrow thought, that the leading dermatologists of New York have never accepted the heresy of the non-contagiousness of leprosy. The history of the disease in the Sandwich Islands afforded the most conclusive proof of its contagiousness. In no other way could its rapid spread throughout the race be accounted for; at the present day from 5 to 10 per cent. of the native population being lepers. In investigating the disease one can get a history of personal exposure in almost every instance. At the leper settlement many of the patients are incapacitated from taking care of themselves, and are obliged to have relatives or friends to look after them, who are presumably free from the disease when they go there. It has been observed that a very large number of these attendants after a time contract the disease; and it is also a well-known fact that a considerable number of foreigners living in the Sandwich Islands have become victims to leprosy.

As to the modes of infection, our knowledge is not positive; but in a large proportion of cases this is probably by sexual intercourse. It seems probable that the disease may be contracted through abrasions of the mucous membrane or skin, and also by means of animal parasites or the bites of mosquitoes and other insects. Vaccination has undoubtedly been one of the causes of the spread of leprosy, humanized virus being used, and no distinction being made between healthy and unhealthy subjects in procuring the virus. Inoculation of leprosy has been successfully carried out in one instance, the subject being a condemned criminal. Dr. Morrow said he had seen one case in which the patient claimed to have contracted the disease from the bite of a leper, and another in which the patient stated that it came from the prick of a pin with which a leprous boy had amused himself by sticking it into his body.

Another moot point is that of heredity. Formerly this was regarded as positively established, and in all ages it has been looked upon as the principal cause of the disease. In his personal observations, however, he said he found no proof whatever to support the view of heredity. A predisposition to leprosy might be transmitted, as in the case of tuberculosis; but he did not believe that the actual germs were ever so transmitted. There is not a single case of congenital leprosy on record. In instances of suspected heredity the child never shows evidences of the disease under the age of 3 years, and usually not until puberty. In general, the disease develops only in those

from 30 to 50 years old. Leprosy, then, is either analogous to late syphilis or else it is not transmitted at all to offspring. Observation shows that the children of lepers do not become infected unless they are kept in close contact with their parents. Very few living children are born in the leper settlement. For seven years there were only two; and later, of twenty-six infants that lived, nine presented evidences of the disease between the ages of 3 and 14, while the remainder escaped infection entirely. It is altogether probable, therefore, that in all cases of suspected heredity the disease is really due to post-natal contagion.

Among the photographic slides thrown upon the screen was one of the late heroic Father Damien, taken only six weeks before his death, and also one of the convict upon whom inoculation was successfully practiced, the only case on record. This man, who had been condemned to death, was given his choice between execution and imprisonment for life with inoculation with leprosy; and the inoculation was made by Dr. Arning in September, 1884. Bacilli were found in numbers about the inoculated spot until March, 1885, after which they gradually diminished in number. For several years the result was regarded as negative, but more recently evidences of infection have developed, and at the present day there can be no question of his having well-marked leprosy.

A discussion then followed in regard to the danger of the spread of leprosy in this country. It was opened by Dr. Morrow, who expressed the opinion that such a danger actually exists, and said that the disease in its present state here might be compared to a conflagration, which could easily be extinguished at first, but which, left to itself until it had gained a certain headway, could not be subdued until all the material it had to feed upon had become exhausted. In the Sandwich Islands in 1848 there were but few cases of leprosy, and for twenty years the Government paid no attention to the disease. By that time there were about 250 cases, and the authorities, becoming alarmed, took stringent measures for its suppression. A system of segregation was adopted, but, unfortunately, the danger was appreciated too late. He did not believe that such a fate as that of the Sandwich Islands was in store for the United States; but, at the same time, he thought there was a sufficiency of leprous seed here to stock this or any other country. The only question was, whether the soil was favorable for the development of the disease. Any one who believed in the contagiousness of leprosy, must assume either that a great danger menaces us, or else that the conditions of our civilization are not favorable for the spread of leprosy.

He went on to say that, in his opinion, the danger was not such as seriously menaced the public health, as the disease would spread very slowly, if at all. At the same time it should be borne in mind that leprosy is a disease in which the resources of medical science are futile, and measures should therefore be taken to stamp it out. It is probable that there are more cases in this country now than ever before. The report of forty-two cases in New Orleans last year was a surprise to every one, and the propriety of legislative enactment for the suppression of the disease is unquestionable.

Dr. C. W. Allen said that his convictions on this subject were very decided. Two years ago, in a paper read before the Medical Society of the County of New York, he had contended that lepers should not be admitted to this country, and that those already here should be segregated. Two years ago he had placed the number of cases in the United States. This number, he had reason to believe, was too small at that time, and he thought there could be no doubt that there had been a considerable increase since then. When we considered the number of cases already existing, and the increased likelihood of the spread of the disease from the increasing facilities of modern travel, etc., this question became one that we could no longer shut our eyes to. Of the forty-two cases reported in New Orleans, where no leprosy was supposed to exist, twenty-nine were natives of Louisiana, and twenty-two of the city of New Orleans. One of these had been a nurse in a hospital where a leper was under treatment. The evidences of the contagiousness of the disease were positive, and as long as a single leper existed anywhere he would constitute a source of danger to those about him.

Dr. L. D. Bulkley said he regarded this subject as one of the most important ever brought before the Academy. No one could fail to see, he thought, that whenever leprosy has been allowed free scope it has spread; while, on the other hand, whenever proper measures have been taken in time against its spread, it has been exterminated. There seemed to him a propriety in having the matter agitated, and he thought the least the health authorities could do would be to ascertain the number and condition of the lepers now in this country. For the last twenty years he had seen two or three cases every year in New York. One case he had met with in a patient who had never traveled many miles from Poughkeepsie, where he lived, and another in one who had never been far from New York. Precisely how they contracted the disease he did not know, but there could be no question that they had derived it from antecedent cases. Leprosy always came from leprosy. He differed from Dr. Morrow, however, in the opinion that the bacillus lepræ does not exist in the soil, water, etc., and believed that it may be left there like other germs. In concluding he said he thought it would be well to appoint a committee to report on the question under discussion at some future time.

Dr. George H. Fox said that the exciting of alarm seemed to him objectionable on account of the false assumption that there has been a spread of leprosy in this country. The cases met with here were nearly all imported, and in spite of the fact that there was no law prohibiting the entrance of lepers, and that no segregation was practiced, he believed that the number at present was smaller than at former periods. Some of the cases formerly here had died, and others had left the country. He also knew of one case at least in which the patient considered himself cured; no signs of the disease having appeared for six years. He admitted that there was a slight danger from the lepers still remaining; but so there was, he said, from hydrophobia. As a rule, the whites of the Sandwich Islands were free from leprosy; and he had yet to learn of an instance of the spread of the disease in a white civilized country. Its prevalence among the Hawaians, he believed, was in great part attributable to their uncleanly habits and mode of living. The danger was of course greater, the greater the number of lepers; but it was very rare for nurses, sisters of charity and others in constant attendance upon leprous patients to contract the disease. All lepers, he thought, should be prevented from landing here, as the paupers were, not so much from the likelihood of their spreading the disease as because, like paupers, they would be a burden on the community. The popular dread of this disease was unfounded and absurd, and even physicians shuddered at the name of leprosy while they looked with complacency upon syphilis and tuberculosis.

Dr. H. G. Piffard said that ten years ago he had read a paper before the Academy in which he discussed the question now raised, and since then his views had not altered. The points for which he contended at that time were, first, that leprosy is contagious; second, that lepers should be segregated; third, that it is the function of the National Government to attend to this. At this meeting a committee was appointed from the Academy to investigate the subject of leprosy in this country, and the committee performed the work required of it so far as it was possible to do so. It did not succeed, however, in tracing out more than forty or fifty cases in the United States; many cases, no doubt, escaping observation.

It was his opinion that, at the present time, there were at least five times as many lepers in the country as there were ten years ago. That segregation was necessary was shown by the fact that wherever this has not been carried out the disease has increased, not in arithmetical, but in geometrical progression. To the question, whose charge is it to attend to this segregation? he would answer, the National Government's. The Government should, in the first place, prevent the entrance of all lepers into the country; and secondly, induce, as far as possible, all lepers now here to go to properly appointed lazarettos. It should be the duty of each State to place its own lepers in these lazarettos. Whether the present discussion could have any practical effect he thought was very doubtful. Not until the necessity of taking active measures to prevent the spread of leprosy forced itself upon public attention would anything be done; but that time, he believed, would surely come sooner or later.

Dr. F. R. Sturgis said he believed that Dr. Morrow was right in stating that there was no immediate danger to the public health from this source, but that it was undoubtedly the duty of the medical profession to call attention to the matter. Up to the present time the evidence of direct inoculation with leprosy had been lacking; but the case of the criminal referred to really seemed to show the possibility of inoculation, and further confirm the contagiousness of the disease. It was probable that leprosy followed a course similar to that of syphilis; being more contagious than in its later stages. As to the bacillus mentioned, he did not think it has as yet been proved to be the cause of the disease, any more than was the case in regard to the so-called bacillus of syphilis. Dr. Fox depended on negative evidence for the position which he assumed; but one positive case was of greater value than all such negative evidence. In our crowded and filthy lodging-houses he believed there existed all the conditions favorable to the development of leprosy if the contagium was once introduced. As to the comparative risk from leprosy and syphilis, he said he would rather run his chances with the latter, as there was, so far as he knew, no cure for leprosy. Syphilis might be ten times more contagious than leprosy, but leprosy was ten times as dangerous.

In closing the discussion Dr. Morrow said there seemed to him but little doubt that the leprosy in the case of the criminal mentioned was positively caused by the inoculation. This was made in 1884, and the four years that elapsed before leprosy made its appearance corresponded entirely with the ordinary incubation period of the disease. It was an important fact, he thought, that the spread of leprosy in the Sandwich Islands had occurred under conditions of high civilization; the state of the population being greatly superior to what it was fifty years before. Dr. Fox labored under a misapprehension in regard to the people there, who were in reality infinitely better off than the majority of the poorer classes in this country. They were accustomed to bathe four or five times a day, and were otherwise cleanly in their habits. Yet, notwithstanding their improved condition, the scourge of leprosy had attained the most fearful proportions among them.

In regard to the contagiousness of the disease, there was one point which offered a possible explanation of the difference of opinion which had

existed concerning it. He thought it extremely doubtful whether the anæsthetic type of leprosy was capable of transmitting the disease. It was this form, rather than the tubercular, which predominated in India and Mexico to-day, and in this the bacilli were not found in the external lesions. To his mind the evidences of contagiousness abounded and superabounded. He did not wish to be considered an alarmist, but in regard to this disease he believed that a wholesome dread was better than a false security. By the adoption of active measures he thought it could be stamped out absolutely. At the conclusion of his remarks Dr. Morrow exhibited under the microscope specimens of the bacillus lepræ which had retained their vitality for a very long period. P. B. P.

NECROLOGY.

Dr. F. H. Rehwinkle.

We regret to announce the death of Dr. F. H. Rehwinkle, of Chillicothe, O., who succumbed on the 7th ult. from the effects of a stroke of paralysis. The stroke came to the doctor as it always comes, suddenly, and without a moment's warning—if one overlook the haggard and broken-down condition which had been apparent in Dr. Rehwinkle for the past year. He had gone across the street after supper, and consenting to take a drive with Dr. Scearce, had gotten into the buggy and sat there talking and laughing with the doctor's daughter, Miss Lizzie, awaiting the doctor's readiness. When Dr. Scearce got into the buggy and took the lines, and Dr. Rehwinkle bade Miss Lizzie good evening, there was no indication whatever of the terrible affliction that was about to befall him; but the horse had not taken twenty steps when, in the reply to a question that Dr. Scearce put to his companion, he observed that something was wrong. Observing him more closely when they reached a point near the postoffice, he remarked, "Doctor, you are sick!" and immediately turning around drove back to Dr. Rehwinkel's house, less than a hundred yards distant, but with the wreck of the alert, intelligent and sentient human being who had left there but a moment before. With assistance he was carried into the house, and to his room, where an examination of the patient showed that there was complete paralysis of the left side. He afterwards sank into a half comatose condition, though able to recognize his relatives and friends, and in that condition had remained up to the time of his death.

The most intimate friends of Dr. Rehwinkle have known for some time past that he feared what has now happened. It was only a short time ago that he remarked in casual conversation with a party of friends, "I believe that I will die of paralysis; and I fear at times that the stroke has been hanging over me for months, and that it may fall at any moment." All his friends had noticed how terribly he had aged within the past year; how worn and haggard he had looked; and it has been a source of frequent, sympathetic and regretful comment among them. He had complained for some time of an unpleasant sensation in the neighborhood of the heart, and this, and the fancied symptoms of paralysis have been such as to prevent him from venturing from home any distance.

Dr. Rehwinkle has been regarded as a dental surgeon of extraordinary science and skill; few or no surgeons in the state ranking higher than he in his chosen profession. To him was accorded the compliment of appointment as one of the three American Secretaries to the International Congress of Dental Surgeons, which assembled at Washington D. C., in 1887; and upon him fell a large proportion of the work of preparation for that meeting.

Dr. Rehwinkle was a member of the American Medical Association, and Chairman of the Section on Dental and Oral Surgery.

MISCELLANY.

THE 75,000 EDITION.—The *Chicago Medical Journal and Examiner* says:

The business manager of THE JOURNAL of the Association has issued an extra edition of seventy-five thousand copies of THE JOURNAL, which contains a carefully prepared report of the requirements of the various medical colleges of the United States and Canada, compiled by Dr. W. G. Eggleston, formerly assistant editor of THE JOURNAL.

The additional work involved in issuing this large edition has been considerable, and it is to be hoped that it will be the means of advancing the interests of the Association and of its official organ, and thus reward the business manager for his faithful efforts to serve both.

MEDICAL SOCIETY NOTES.—The semi-annual meeting of the Medical Society of Fulton County, N.Y., was held at Gloversville on the 18th ult. "Modern Treatment of Wounds" was the subject of a paper read by Dr. F. Drury, of Broadalbin, Dr. W. C. Wood read a paper on "Lazy Therapeutics." Miss M. Helen Cullings was admitted to membership.

At the annual meeting of the Rochester Pathological Society, held recently, the following were elected officers for the ensuing year: President, Dr. Benjamin Wilson; Vice-President, Dr. E. T. Dow; Secretary, Dr. Ogden Backus. Dr. E. W. Mulligan, the retiring President, read a paper on "Microscopy in Medicine."

HEALTH IN MICHIGAN, MAY, 1889.—For the month of May, 1889, compared with the preceding month, the reports indicate that diarrhœa and inflammation of kidney increased, and that influenza, remittent fever, pneumonia, erysipelas and pleuritis decreased in prevalence.

Compared with the preceding month, the temperature in the month of May, 1889, was higher, the absolute humidity was more, the relative humidity and the day and the night ozone were less.

Compared with the average for the month of May in the three years, 1886–88, tonsillitis increased, and measles, consumption of lungs, erysipelas and remittent fever were less prevalent in May, 1889.

For the month of May, 1889, compared with the average of corresponding months in the three years 1886–'88, the temperature was slightly lower, the absolute and the relative humidity were slightly less, and the day and the night ozone were about the same.

Including reports by regular observers and others, diphtheria was reported present in Michigan in the month of May, 1889, at 22 places, scarlet fever at 48 places, typhoid fever at 10 places, measles at 23 places, and small-pox at 2 places.

Reports from all sources show diphtheria reported at 1 place less, scarlet fever at 5 places more, typhoid fever at 5 places more, measles at 9 places more, and small-pox at 1 place more in the month of May, 1889, than in the preceding month.

THIRTY-ONE YEARS A UNIVERSITY PROFESSOR.—The resignation of Dr. T. G. Richardson from the faculty of the Tulane University, brought forth the following expression from his fellow-members of the faculty:

MEDICAL DEPARTMENT,
Tulane University of Louisiana,
New Orleans, May 20, 1889.

WHEREAS, Prof. T. G. Richardson, who has served the medical department thirty-one years—fourteen years as Professor of Anatomy and seventeen as Professor of Surgery, including twenty years as Dean—has urged the acceptance of his own resignation because of ill-health; therefore be it

Resolved, That Prof. Richardson's resignation is accepted with the utmost regret, this faculty being thereby deprived of its most valued member and its wisest counselor.

Resolved, That the members of this faculty can never forget that his inflexible devotion to truth, honor and duty furnished for their guidance the highest and noblest standard of true manhood; that his ability and experience as a teacher placed him in the foremost rank of medical instructors; that his wisdom as Dean successfully guided the destiny of the medical department through many years of its severest trial; and that to him, more than to any other, is due its present prosperity.

Resolved, That while deeply deploring the necessity that withdraws from active service our senior professor, yet our hearts are revived by the hope that time and rest will restore him to health and give to him many happy and useful years wherewith to bless his family and his friends and to benefit all of his fellow-citizens.

Resolved, That Dr. T. G. Richardson is hereby chosen Emeritus Professor of Surgery.

Signed by Stanford E. Chaillé, M.D., Dean; Ernest S. Lewis, M.D., Jno. B. Elliott, M.D., committee in behalf of a unanimous faculty.

SUMMER DIARRHŒA.—*The Medical Record* says: The period has come when the well-to-do minority of physicians leaves the city, while the hard-working majority stays in town and writes articles on summer diarrhœa and related topics. Fortunately, something new is furnished us every year on these matters. We have passed from the stage of heat and sour milk as causative factors of summer diarrhœa; we are even leaving the microbe a little behind, and are dallying now with the ptomaines. The latest theory is one set forth by Dr. Ballard, in a report to the Local Government Board of England on the causation of the annual mortality from diarrhœa (*Lancet*). Dr. Ballard states his views as follows: "That the essential cause of diarrhœa resides ordinarily in the superficial layers of the earth, where it is intimately associated with the life processes of some microörganism not yet detected, captured, or isolated. That the vital manifestations of such organism are dependent, among other things, perhaps principally, upon conditions of season, and on the presence of dead organic matter, which is its pabulum. That, on occasion, such microörganism is capable of getting abroad from its primary habitat, the earth, and having become air-borne, obtains opportunity for fastening on non-living organic material, both as nidus and as pabulum, in undergoing various phases of its life history. That in food, inside of, as well as outside of the human body, such microörganism finds, especially at certain seasons, nidus and pabulum convenient for its development, multiplication, or evolution. That from food, as also from the contained organic matter of particular soils, such microörganism can manufacture, by the chemical changes wrought therein through certain of its life processes, a substance which is a virulent chemical poison; and that this chemical substance is in the human body the material cause of epidemic diarrhœa."

A SOUVENIR.—The Lambert Pharmacal Co., of St. Louis, distributed at the Newport meeting a very handsome little souvenir containing a list of the officers of the Association, programme of the general sessions, list of Presidents of the Association from 1846 to 1889, and a number of views of Newport.

TRAINING SCHOOLS FOR NURSES.—The seventh annual graduating exercises of the Illinois Training School was held at the County Hospital, Chicago, on the 25th ult. Addresses were made by Dr. J. S. Knox, Charles L. Hutchinson, President Brand, of the County Hospital medical staff, Franklin H. Head, Dr. Julia Holmes Smith, Dr. Sarah Hackett Stevenson, and Mrs. C. B. Lawrence. Diplomas were presented by Dr. Johnson to the following graduates: Abbie Brotherton, Mary L. Grott, Orissa Stanton, Lillian E. Beckley, Emma Baumbach, Ida F. Towers, Nora Morgan, Lizzie Glennie, Sara Krueger, Cora Overholt, Mary H. Porter, Lizzie M. Graham, May Bixby, Salome Beardsley, Hattie Sigsbee, Ellen Strandt, Carrie Keeler, Mary M. Roburn, Mattie Hirth. Dora Stager, Mary D. Sexton, Flora A. Reid, Anna Nicholes, Edna Goble, Laura Happerly, Idora Rose, Lillian Gilmore, Carrie Leoner, Nora Vasey, Emily Vasey, Emily J. Keisz, Ella Harth, Joanna Kellogg, Victoria King.

The Commencement Exercises of the Memphis, Tenn., Training School for Nurses was held in that city on the 23d ult. There were four graduates: Misses Effie Ingham, Hattie Dunlop, Lena C. Angevin, and Tillie J. Aiken.

DIPHTHERIA AND THE SALOON BUSINESS.—The Paterson, N. J., Board of Health has distinguished itself by a recent decision. It is to the effect that where the placing of a green card on a house to indicate the presence of diphtheria on the premises would interfere with the business of a saloon-keeper, the card may be placed on the back door, where the general public may not see it!

PAMPHLETS RECEIVED.

Transactions of the Medical Society of the State of New York, 1889.

Uterine Massage. By W. B. Sprague, M.D., Detroit, Mich. (Reprint.)

Observations in Clinical Therapeutics. By J. A. Robison, M.D., Chicago. (Reprint.)

Annual Report of the Essex County Asylum for the Insane, Newark, N. J. 1889.

Eighth Annual Announcement of the Woman's Medical College of Baltimore. 1889.

The Climate of Southwestern Texas and its Advantages as a Health Resort. By M. K. Taylor, Major and Surgeon, U. S. Army, retired. (Reprint.)

Puerperal Hysterectomy or Porro's Operation. By Edwin Ricketts, M.D., Cincinnati. (Reprint.)

The Radical Cure of Hernia. By Thos. W. Kay, Scranton, Pa. (Reprint.)

Ninth Annual Report of the State Board of Health of Illinois.

Second Biennial Report of the North Carolina Board of Health.

Sixth Report of the State Committee on Lunacy of the Commonwealth of Pennsylvania.

Proceedings of the Florida Medical Association. 1889.

Annual Address of the President of the Philadelphia Obstetrical Society. By Prof. Theophilus Parvin, M.D. (Reprint.)

Electric Cataphoresis as a Therapeutic Measure. By Frederick Peterson, M.D., New York. (Reprint.)

Yellow Fever. By Frank H. Caldwell, M.D., Sanford, Fla.

So-called Varicocele in the Female. By Henry C. Coe, M.D., M.R.C.S., New York. (Reprint.)

Fees in Hospitals. By Henry J. Bigelow.

Twenty-eighth Annual Report of the Cincinnati Hospital. 1889.

The Question of Relationship between Lichen Planus (Wilson) and Lichen Ruber (Hebra). By A. R. Robinson, M.B., L.R.C.P. (Reprint.)

The Rational Method of Preventing Yellow Fever on the South Atlantic Coast. By J. C. LeHardy, M.D., Savannah, Ga. (Reprint.)

A Clinical Study on Alopecia Areata and its Treatment. By L. Duncan Bulkley, A.M., M.D., New York. (Reprint.)

Scarlatinous Otitis. By Charles H. May, M.D., New York. (Reprint.)

Hygiene versus Surgery in Gynecology. By Julia W. Carpenter, M.D., Cincinnati, O. (Reprint.)

Warner's Therapeutic Reference Book. By Wm. R. Warner, Philadelphia.

Proceedings of the Quarantine Conference held in Montgomery, Ala., March 5-7, 1889.

LETTERS RECEIVED.

Dr. John Marsh, Madisonville, O.; Dr. R. J. Dunglison, Philadelphia; Dr. C. F. Shattuck, Boston; O. T. Phythian, Cincinnati; Dr. St. V. Martinitz, Cedar Rapids, Ia.; Medical Herald Co., St. Joseph, Mo.; Dr. Frank P. Peck, Mount Pleasant, Ia., Allen H. Still, J. H. Bates, New York; Dr. Geo. C. Webber, Millbury, Mass.; Dr. J. L. Hilmantel, Milwaukee; Dr. Chas. C. Browning, Adrian, Ill.; Johnson Eliot, Washington; Battle & Co., St. Louis; R. L. Watkins, Prospect, O.; G. H. Whitcomb, Greenwich, N. Y.; Medical Press Co., Philadelphia; Reed & Carnrick, New York; Dr. W. H. Dunlop, Syracuse, N. Y.; Woman's Medical College of New York; Dr. H. O. Walker, Detroit; Jas. I. Fellows, New York; Dr. W. H. Geddings, Aiken, S. C.; Ward Bros., Jacksonville, Ill.; Dr. John G. Ames, Marblehead, Mass.; Miner & Elbreg, Indianapolis; Dr. N. Senn, Milwaukee, Wis.; G. E. Stechert, New York; Dr. John H. Chew, Chicago; R. C. Flack, Bound Brook, N. J.; George Chaffee, Warren Centre, Pa.; Dr. W. W. Skinner, Lutz & Movius, Lehn & Fink, New York; Dr. Isaac Kay, Springfield, O.; Dr. James Tyson, Philadelphia; Dr. C. R. Henderson, Yazoo City, Miss.; Dr. C. Wilbur, National Military Home, O.; Dr. P. B. Porter, New York; Dr. Florentine, East Saginaw, Mich.; J. H. Chambers & Co., St. Louis; Dr. D. S. Campbell, Detroit; Dr. J. B. Murdoch, Pittsburgh; American & Continental Sanitas Co., New York; Dr. James Tyson, Philadelphia; Nichols & Shepard, Three Rivers, Mich.; Dr. J. T. Wilson, Sherman, Tex.; Dr. J. Chris. Lange, Pittsburgh; Dr. Wm. G. Parrish, Burlington, N. J.; Samuel G. Sloane, Chicago; Dr. G. W. Stockwell, Knoxville, Mo.; Lambert Pharmacal Co., St. Louis; Dr. Thos. H. Manley, New York; Dr. C. W. Stevens, Charlestown, Mass.; Cincinnati Polyclinic; Dr. E. S. King, Sweet Home, N. C.; F. A. Davis, Philadelphia; Dr. J. A. Southard, Fort Smith, Ark.; Dr. J. R. Briggs, Dallas, Tex.; Dr. Geo. P. Lee, Merced, Cal.; Thos. F. Goode, Buffalo Lithia Springs, Va.

Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department, U. S. Army, from June 15, 1889, to June 21, 1889.

By direction of the acting Secretary of War, the following changes in the stations of officers of the Medical Department are ordered:

Major Albert Hartsuff, Surgeon, is relieved from duty at Ft. Hamilton, N. Y., and ordered to Ft. Omaha, Neb.

Major J. M. Brown, Surgeon, relieved from duty at Ft. Omaha, Neb., and ordered to Ft. Meade, Dakota.

Capt. W. C. Shannon, Asst. Surgeon, relieved from Ft. Meade, Dak., and ordered to Ft. Yates, Dak.

First Lieut. Francis J. Ives, Asst. Surgeon, relieved from duty at Ft. D. A. Russell, Wyo., and ordered to Ft. Lyon, Col.

Capt. J. F. Philips, Asst. Surgeon, relieved from duty at Ft. Lyon, Col., and ordered to Ft. Crawford, Col.

First Lieut. Walter D. McCaw, Asst. Surgeon, relieved from duty at Ft. Crawford, Col., and ordered to Ft. McPherson, Atlanta, Ga. Par. 9, S. O. 136, A. G. O., Washington, D. C., June 13, 1889.

Capt. Robert J. Gibson, Asst. Surgeon U. S. A. (Ft. Trumbull, Conn.), is designated as medical officer for the encampment at Fisher's Island, N. Y., and he will proceed to Fisher's Island, N. Y., August 1, 1889, and report to the commanding officer for duty at that post. Par. 5, S. O. 133, Hdqrs. Div. of the Atlantic, June 13, 1889.

Capt. Walter W. R. Fisher, Asst. Surgeon, leave of absence for one month granted by S. O. 30, c. s., Dept. of California, and extended fifteen days by par. 3, S. O. 37 c. s., from these hdqrs., is further extended fifteen days. Par. 1, S. O. 41, Hdqrs. Div. of the Pacific, San Francisco, Cal., June 12, 1889.

By direction of the acting Secretary of War, the following changes in the stations of officers of the Medical Dept. are ordered:

First Lieut. Benj. L. Ten Eyck, Asst. Surgeon (recently appointed), ordered to Ft. Leavenworth, Kan.

Capt. Jno. de B. W. Gardiner, Asst. Surgeon, relieved from duty at Ft. Leavenworth, Kan., and ordered to Ft. Reno, Ind. Ter.

Par. 3, S. O. 132, A. G. O., June 8, 1889, is amended so as to direct First Lieut. P. G. Wales, Asst. Surgeon, to report to Ft. Huachuca, Ariz., for duty in place of Presidio of San Francisco, Cal.

Capt. M. C. Wyeth, Asst. Surgeon, relieved from duty at Ft. Huachuca, Ariz., and ordered to Ft. McDowell, Ariz.

First Lieut. Leonard Wood, Asst. Surgeon, relieved from duty at Ft, McDowell, Ariz., and ordered to Presidio of San Francisco, Cal. Par. 2, S. O. 138, A. G. O., June 15, 1889.

First Lieut. Henry S. T. Harris, Asst. Surgeon, granted leave of absence for two months, by direction of the acting Secretary of War. Par. 13, S. O. 140, A. G. O., June 18, 1889.

EXTRACT.

By direction of the acting Secretary of War, the following changes in the stations of the Medical Department are ordered:

First Lieut. Benjamin L. Ten Eyck, Asst. Surgeon (recently appointed), will proceed from New York City to Ft. Leavenworth, Kan., and report for duty to the commanding officer of that post. Par. 2, S. O. 138, A. G. O., Washington, D. C., June 15, 1889.

Official List of Changes in the Medical Corps of the U. S. Navy for the Week Ending June 22, 1889.

Medical Inspector Grove S. Beardsley, granted a year's leave of absence, with permission to leave the United States.

Surgeon N. M. Ferebee, detached from special duty at Naval Academy, and wait orders.

Asst. Surgeon George Rothganger, ordered to the Naval Hospital at Mare Island, Cal.